SLIDE IN RANGE

BASIC: NE58F9710WS
MODEL: NE58F9500SS
MODEL CODE: NE58F9500SS/AA

SERVICE Manual

FREE STANDING RANGE

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2. Product Specification
3. Disassembly and Reassembly
4. Troubleshooting
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Refer to the service manual in the GSPN(see rear cover) for the more information.

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1. Precaution

1-1 Forward

This SAMSUNG Service Manual, “ 30” Slide In Self-Cleaning Electric Range,” provides the technician with information on the operation and service of the Slide In Self-Cleaning Electric Range. It is to be used as a training Service Manual. For specific information on the model being serviced, refer to the “Owner’s Manual” or “Tech Sheet” provided with the electric range.

1-2 Safety Precautions

- Repairs of the appliance should be carried out by a licensed technician only. Incorrect repairs may result in dangerous situations. If you need repairs, contact a SAMSUNG Service Center or your dealer.
- If the power cord is defective, it must be replaced by a qualified service agent with a UL listed range cord.
- Electrical leads and cables should not be allowed to touch the oven.
- Rating plate is located on the left side of storage drawer.
- The power supply of the appliance should be turned off when it is being repaired.

⚠ WARNING

- To avoid risk of severe personal injury or death, disconnect power before working/servicing on appliance to avoid electrical shock.
- When the oven operates, the interior parts will be very hot.

SAMSUNG Electronics assumes no responsibility for any repairs made on our products by anyone other than Authorized Service Technicians.

1-3 Important Safety Instructions

Read and follow all instructions before using your oven to prevent the risk of fire, electric shock, injury to person, or damage when using the range. This guide doesn't cover all possible conditions that may occur.
For further assistance contact your service agent or manufacturer.

WARNING

This symbol will help alert you to hazards or unsafe practices which could cause serious bodily harm or death.

- Be sure your appliance is properly installed and grounded by a qualified technician.
- Do not repair or replace any part of the appliance unless specifically recommended in the manual. All other servicing should be referred to a qualified technician.
- Always disconnect power to appliance before servicing by removing the fuse or switching off the circuit breaker

WARNING

- INJURIES CAN OCCUR IF THE RANGE TIPS
- INSTALL ANTI-TIP DEVICE PACKED WITH RANGE

- FOLLOW ALL INSTALLATION INSTRUCTIONS

To reduce the risk of tipping of the range, the range must be secured by properly installed anti-tip devices. To check if the bracket is installed properly,

- Warming drawer : grasp the top rear edge of the Range and carefully attempt to tilt it forward. verify that the anti-tip devices are engaged.
- Storage drawer : Remove drawer and verify leveling leg is inserted into and fully secured by the anti-tip devices.

Refer to the installation manual for proper anti-tip bracket installation.

- Do not step, lean or sit on the doors of the range -this can cause the range to tip, resulting in burns or serious injuries.

WARNING

- **DO NOT TOUCH HEATING ELEMENTS OR INTERIOR SURFACES OF OVEN** – Heating elements may be hot even though they are dark in color. Interior surfaces of an oven become hot enough to cause burns. During and after use, do not touch, or let clothing or other flammable materials contact heating elements or interior surfaces of oven until they have had sufficient time to cool. Other surfaces of the appliance may become hot enough to cause burns – among these surfaces are oven vent openings and surfaces near these openings, oven doors, and windows of oven doors.

CAUTION

Do not store items of interest to children in cabinets above a range or on the back guard of a range – children climbing on the range to reach items could be seriously injured.

- Do Not Leave Children Alone - Children should not be left alone or unattended in area where appliance is in use. They should never be allowed to sit or stand on any part of the appliance.
- Never Use Your Appliance for Warming or Heating the Room.
- Storage in or on Appliance – Flammable materials should not be stored in an oven or near surface units. Be sure all packing materials are removed from the appliance before operating it. Keep plastics, clothes and paper away from parts of the appliance that may become hot
- Wear Proper Apparel – Loose-fitting or hanging garments should never be worn while using the appliance.
- Do Not Use Water on Grease Fires – Turn off oven to avoid spreading the flame. Smother the fire or flame by closing the door or use dry chemical, baking soda or foam- type extinguisher.
- Use Only Dry Potholders – Moist or damp potholders on hot surfaces may result in burns from steam. Do not let potholder touch hot heating elements. Do not use a towel or other bulky cloth.

WARNING

SURFACES

- **DO NOT TOUCH SURFACE UNITS OR AREAS NEAR UNITS** – Surface units may be hot even though they are dark in color. Areas near surface units may become hot enough to cause burns. During and after use, do not touch, or let clothing or other flammable materials contact surface units or areas near units until they have had sufficient time to cool. Among these areas are the cook-top and surfaces close to the cook-top.

WARNING

To avoid risk of electrical shock, personal injury, or death, make sure your range has been properly grounded and always disconnect it from main power supply before any servicing.

1. Precaution

SURFACE COOKING UNITS

- **Use Proper Pan Size –** This appliance is equipped with one or more surface units of different sizes. Select utensils having flat bottoms large enough to cover the surface unit heating element. The use of undersized utensils will expose a portion of the heating element to direct contact and may result in ignition of clothing. Proper relationship of utensil to burner will also improve efficiency.
- **Never Leave Surface Units Unattended at High Heat Settings** – Boil overs may cause smoking and greasy spillovers may ignite.
- **Glazed Cooking Utensils** – Only certain types of glass, glass/ceramic, ceramic, earthenware, or other glazed utensils are suitable for range-top service without breaking due to the sudden change in temperature.
- **Utensil Handles Should Be Turned Inward and Not Extend Over Adjacent Surface Units** – To reduce the risk of burns, ignition of flammable materials, and spillage due to unintentional contact with the utensil, the handle of a utensil should be positioned so that it is turned inward, and does not extend over adjacent surface units.
- Be sure you know which burner switch operates each surface unit. Make sure you turned on the correct surface unit.

SELF-CLEAN OVENS

- **Do Not Clean Door Gasket** – The door gasket is essential for a good seal. Care should be taken not to rub, damage, or move the gasket.
- **Do Not Use Oven Cleaners** – No commercial oven cleaner or oven liner protective coating of any kind should be used in or around any part of the oven.
- **Clean in the self-clean cycle only parts listed in this manual**. Before self-cleaning the oven, remove the broiler pan and any utensils from the oven.
- **Never keep pet birds in the kitchen** – the health of birds is extremely sensitive to the fumes released during an oven self-clean cycle. Fumes may be harmful or fatal to birds. Move birds to well-ventilated room.
- **Important Instruction** – In the event the self-clean mode “F” code goes on, or three long beeps sound, oven is malfunctioning in the self-clean mode. Turn off or disconnect appliance from power supply and have serviced by a qualified technician.

VENTILATING HOODS:

- **Clean Ventilating Hoods Frequently** – Grease should not be allowed to accumulate on hood or filter.
- **When flaming foods under the hood, turn the fan on.**

OVEN

- **Use Care When Opening Door** – Let hot air or steam escape before you remove or replace food in the oven
- **Do Not Heat Unopened Food Containers** – Build-up of pressure may cause container to burst and result in injury.
- **Keep Oven Vent Ducts Unobstructed** – the oven vent is located in the front above the oven door and under the cook top. This area could become hot during oven use. Never block this vent and never place plastic or heat sensitive items near the vent
- **Placement of Oven Racks** – Always place oven racks in desired location while oven is cool. If rack must be moved while oven is hot, do not let potholder contact hot heating element in oven.
- **Do Not** allow aluminum foil or meat probe to contact heating elements.

GLASS/CERAMIC COOKING SURFACES

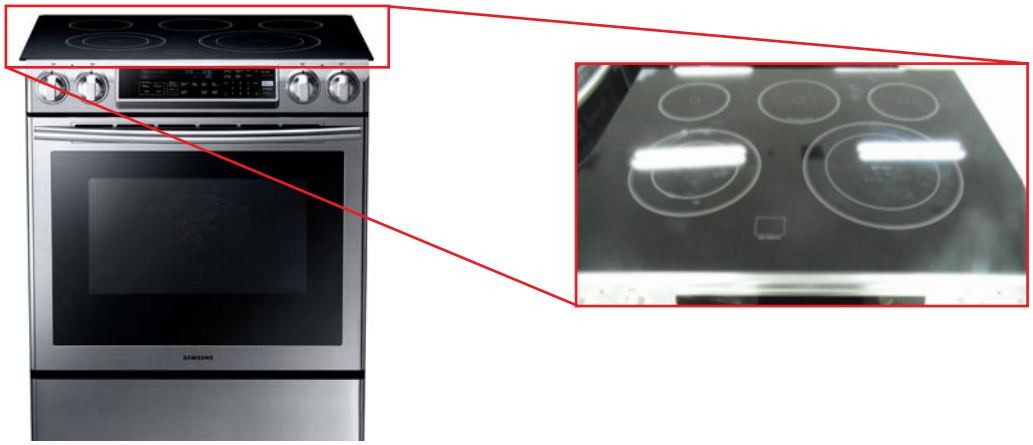
- **Do Not Cook on Broken Cook-Top** – If cook top should break, cleaning solutions and spillovers may penetrate the broken cook top and create a risk of electric shock. Contact a qualified technician immediately.
- **Clean Cook Top With Caution** – If a wet sponge or cloth is used to wipe spills on a hot cooking area, be careful to avoid steam burn. Some cleaners can produce noxious fumes if applied to a hot surface.

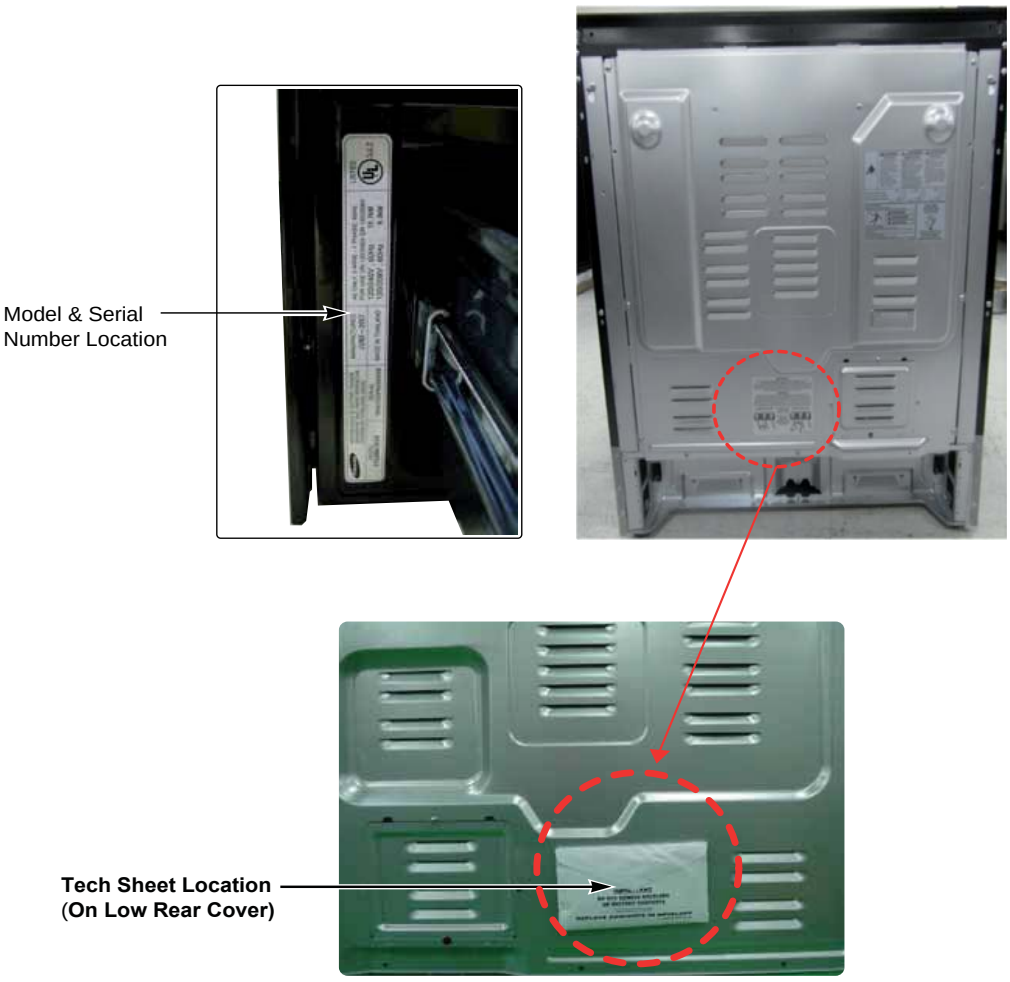
DEEP FAT FRYERS:

- Use extreme caution when moving the grease kettle or disposing of hot grease.

1-4 Model & Serial Number Label and Tech Sheet Locations

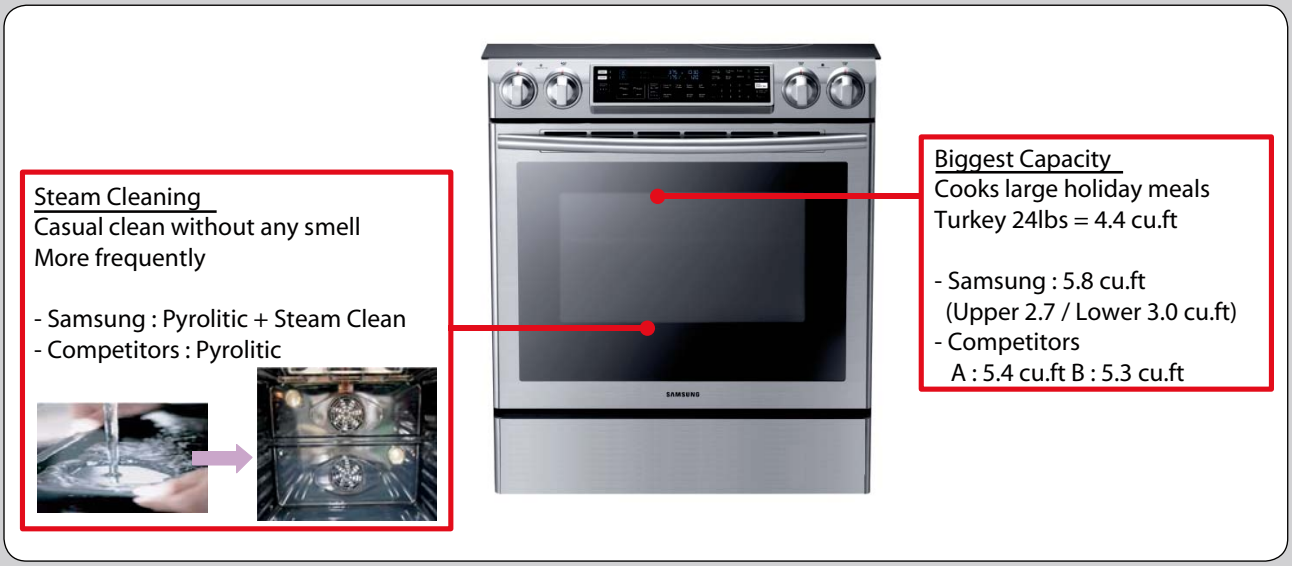
This Model / Serial Number label and Tech Sheet locations are shown below.

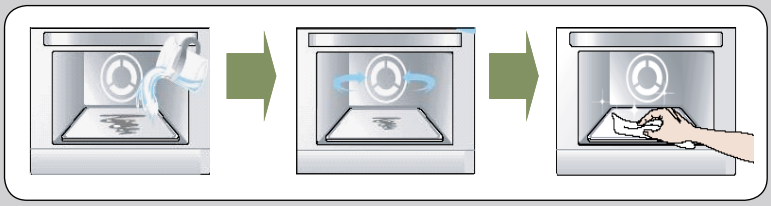




2. Specifications

2-1 Features

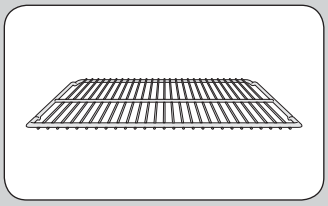
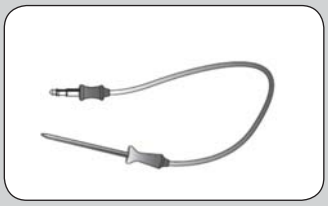
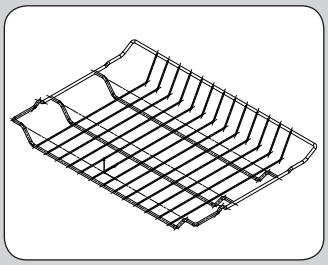
Features


Features	
Item	Steam Clean
How to Use	- Pour the water 10oz (+detergent) - Push the steam cleaning button - After finished steam clean feature, the oven will be shut off automatically in half a minute. - Wipe it out with wet cloths.
Operating (Temperature)	About 158°F
Operating Time	20 Minutes
Used Heater	Bottom Bake Heater
Smell	No smell
Tool to clean	Wet cloths
	
Biggest Capacity - The biggest capacity in current US market !!! - It benefits consumers to cook large family meals during the Thanksgiving & Christmas seasons (i.e Turkey 25 lbs = 4.4 cu ft, 20 lbs = 3.5 cu.ft)	

2-2 Table of Specifications

Items		Model	
		BASIC MODEL	NEW MODEL
Model Name		NE58F9710WS	NE58F9500SS
Category		Convection	Convection
Overall	Width	30"	30"
	Installation type	Slide in	Slide in
	Color availability	STS	STS
Control	Oven	Touch	Touch
	Cooktop	Knob	Knob
	Display	VFD	VFD
	Electronic clock	Yes	Yes
	Control lock capability	Yes	Yes
	Audible preheat signal	Yes	Yes
Cooktop	Meterial	Ceramic glass	Ceramic glass
	# of element	5	5
Power	LR	7" - 1,800W	6” – 1,200W
	RR	6" - 1,200W	6” – 1,200W
	CR	Warming Center(100W)	Warming Center(100W)
	LF	Bridge(7”/Bridge-1,800/2,600W)	Dual(6”/9”-1,900/3,000W)
	RF	Triple (6”/9”/12”-1,100/2,200/3,000W)	Dual (9”/12”-1,900/3,000W)
Oven	Capacity(cu.ft)	5.8	5.8
	Broil element	4,200 watts	4,200 watts
	Bake element	3,000 watts	3,000 watts
	Convection System	Yes	Yes
	Convection element	Yes(1,250W / 240V)	Yes(1,250W / 240V)
	# of Racks	3	3
	Interior oven light	120V, 40 watts	120V, 40 watts
	Cleaning	Pyrolytic & steam	Pyrolytic & steam
Drawer	Type	Warming drawer	Storage drawer (N/A)
	Element	600 watts	NA
	Warming rack	No	No
Dimensions (inch)	Oven interior (W x H x D)	25 x 21 1/8 x 19	25 x 21 1/8 x 19
	Exterior - Width	31 (Cook top) : 787mm 29 4/5 (Body) : 757mm	31 (Cook top) : 787mm 29 4/5 (Body) : 757mm
	Exterior - Height	36 (cook top) : 913mm	36 (cook top) : 913mm
	Exterior - Depth	26 3/10 (Door) : 667.7mm 28 3/5 (with handle) : 727.7mm	26 3/10 (Door) : 667.7mm 28 3/5 (with handle) : 727.7mm
	Net weight : Lbs (Kg)	209 lbs (95Kg)	190.6 lbs (86.5Kg)
Power	Rating(240V 60Hz)	Range : 5,400 W Cooktop : 8,600 W	Range : 4,700 W Cooktop : 8,500 W

2-3 Accessory

Item	Description	Code No.	Q'ty
	RACK-FLAT	DG75-01001C	2
	SENSOR-PROBE	DG32-00013A	1
	RACK WIRE-BOTTOM	DG75-01056A	1

WARNING

ELECTRICAL SHOCK HAZARD

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

3-1 Removing the Assy-Frame Cooktop

Item	How to use	Pictures
Screw driver	Use for assembly and disassembly of all screws	
Tubing Wrench	Use for assembly and disassembly of tubing to the burner cup	
7mm Vox Driver	Use for assembly and disassembly of injector nozzles. (Cooktop/Broil/Bake burner)	
9mm Vox Driver	Use for assembly and disassembly of injector nozzles. (Convection Fan)	

3-2 Removing Cover-Back Main Wire, Cover-Back Guard Wire and PCB-Main

PRECAUTION

When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

Parts	Explanation Photo	Explanation
Cover-Back Main wire		1. Turn off the electrical supply going to the range. 2. Pull the range away from the wall so that you can access the rear panel. 3. Remove the 9 screws from the Cover-Back Main Wire and remove the panel.

* Reassembly of All part is the reverse order of disassembly.

3-3 Removing PCB-Main

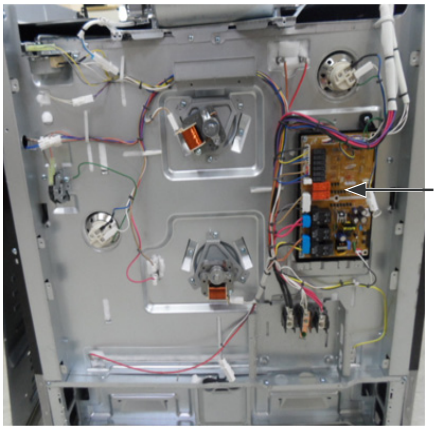
WARNING

ELECTRICAL SHOCK HAZARD

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

PRECAUTION

When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

Parts	Explanation Photo	Explanation
PCB Main		**1.** Turn off the electrical supply going to the range. **2.** Pull the range away from the wall so that you can access the rear panel. **3.** Remove cover-back main wire. (See step 3 on page 10) **4.** There is 1 PCB (printed circuit board) on the rear of the range.

* Reassembly of All part is the reverse order of disassembly.

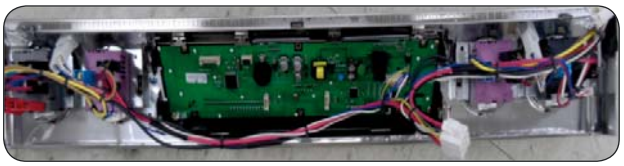
3-4 Removing Touch PCB

WARNING

Disconnect power before servicing the range Replace all panels before operating range. Failure to do so can result in death or electrical shock.

PRECAUTION

When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

Parts	Explanation Photo	Explanation
Touch PCB		**1.** Turn off the electrical supply going to the range. **2.** Remove 4 screws under the control box. (See step 1,2 on page 13) **3.** Remove connector on SUB PCB.
		4. Remove 2 screws. (Left and Right)

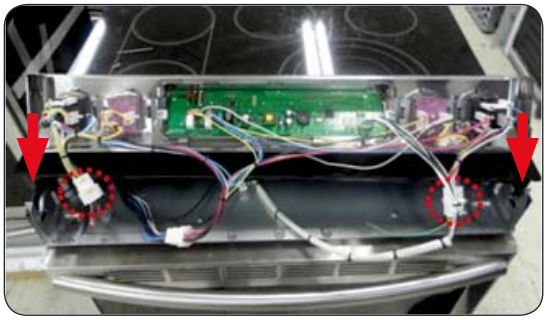
* Reassembly of All part is the reverse order of disassembly.

3-5 Removing Surface elements and The Ceramic Glass Cooktop

WARNING

ELECTRICAL SHOCK HAZARD

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock..

<table>
<tr><th>Parts</th><th>Explanation Photo</th><th>Explanation</th></tr>
<tr><td rowspan="4">
Surface elements and Ceramic Glass Cooktop</td><td> </td><td>1. Unplug the cord or disconnect power
2. Open oven door and remove the 4 screws located at under the Control box.</td></tr>
<tr><td colspan="2">  </td></tr>
<tr><td colspan="2">3. Disconnect 2 wire harness connectors. Then remove the 2 screws.
4. Remove 2 screws at the Rear (Right , Left).</td></tr>
<tr><td> </td><td>5. Remove cover back main wire.
(See step 1,2,3 on page 10)</td></tr>
</table>

3-6 Removing The Latch-Door & Switch-Door Plunger

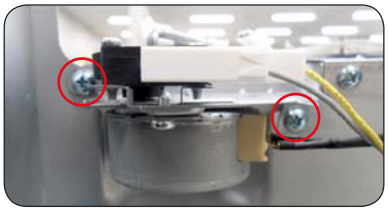
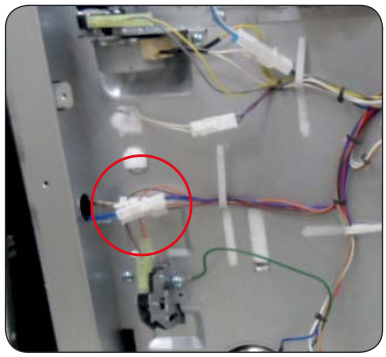
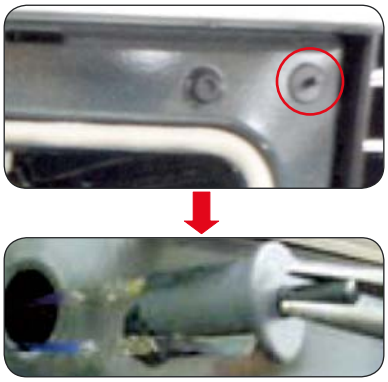
WARNING

ELECTRICAL SHOCK HAZARD

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

CAUTION

When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

Parts	Explanation Photo	Explanation
Latch-Door & Switch-Door Plunger		**1.** Turn off the electrical supply going to the range. **2.** Open the oven door. **3.** Raise the cooktop (see page 14 for the procedure). **4.** To remove the Latch-Door: **a)** Remove the 2 screws from the front of cavity.
		**b)** Remove two screw from Cover-Back Main Guard and remove latch-door
		**5.** To remove the Switch-Door Plunger **a)** Remove the Cover-Back Guard Wire. (see page 10 for the procedure). **b)** Release the wire from Cable Clamp. **c)** Remove the Switch-Door Plunger from the range. Remove the switch carefully with a pair of pliers and using a slight up and down motion while pulling the switch out.
		

* Reassembly of All part is the reverse order of disassembly.

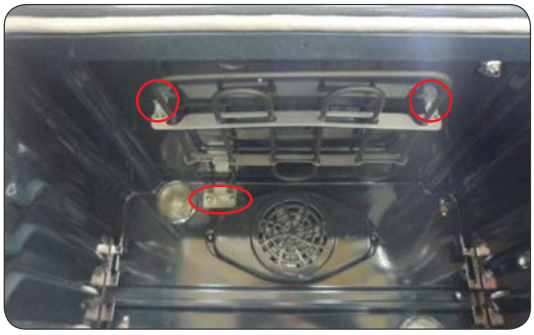
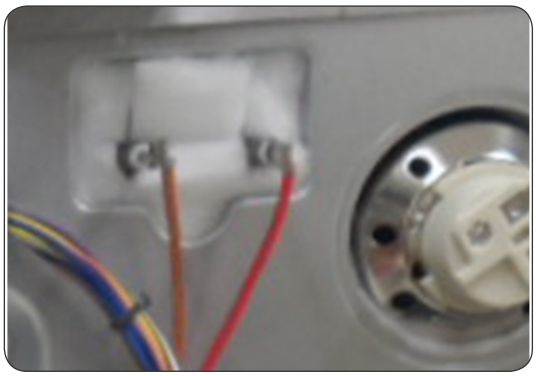
3-7 Removing Heater-Broil

WARNING

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

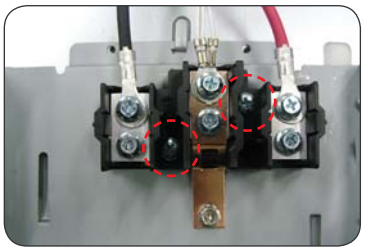
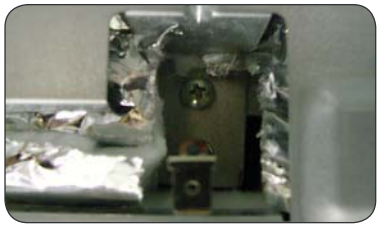
CAUTION

When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

Parts	Explanation Photo	Explanation
Broil	 	**1.** Turn off the electrical supply going to the range. **2.** Open the oven door and remove the racks from inside the oven. **3.** Remove oven from its mounting location and remove the rear cover. **4.** Remove the two wires from the broil element. **5.** Remove the four screws that are securing the broil element to the cavity. Remove the broil element.

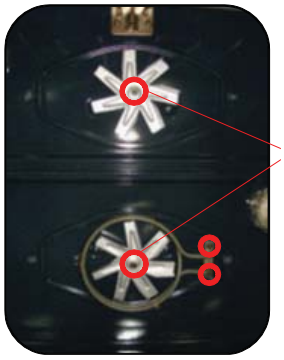
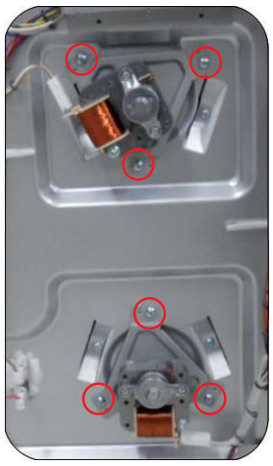
* Reassembly of All part is the reverse order of disassembly.

3-8 Removing Heater-Bake

Parts	Explanation Photo	Explanation
Heater-Bake		**1.** Unplug range or disconnect power. **2.** Pull the range out of its mounting location so that you can access the rear of the unit. **3.** Remove Cover-Back Main Wire. (See step 3~4 on page 10 for procedure) Remove terminal block and bracket cover access by unscrewing the three screws. Disconnect the two wires from the warming drawer heating element.
		**4.** Remove the two screws securing theheater-bake.
		5. Cut the insulation on the lower side.
		6. Carefully pull out Heater-Bake and replace it.

* Reassembly of All part is the reverse order of disassembly.

3-9 Removing Convection Element, Fan-Convection and Motor-Convection

Parts	Explanation Photo	Explanation
Convection Element, Fan-Convection , Motor-Convection	 Bracket convection heater 	1. Disconnect power and remove oven racks. 2. Pull the range out of its mounting location so that you can access the rear of the unit. 3. Remove Cover-Back Main Wire from the unit. (See step 3 on page 10 for procedure) 4. Remove oven door. (See Page 29 on page for procedure) 5. Unscrew 2 screws and remove Cover-Casing. 6. Unscrew 2 screws and remove Bracket-Convection Heater to remove Heater-Convection. 7. Unscrew nut of Fan-Convection, and 2 Fan-Convection. 8. Unscrew 3 points and disconnect a Motor-Convection wire and disconnect Heater-Convection wire.

CAUTION

Be careful not to bend the Fan-Convection(Blade)

* Reassembly of All part is the reverse order of disassembly.

3-10 Removing Lamp

WARNING

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

CAUTION

When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

Parts	Explanation Photo

Explanation

1. Disconnect power.
2. Remove oven door.
3. Turn the glass bulb cover in the oven counterclockwise to remove.
4. Turn bulb counterclockwise to remove from socket.
5. Replace bulb and cover by turning clockwise.

Lamp

CAUTION

Be careful not to scratch or chip the oven liner paint when to remove the oven light socket in the next step.

Explanation Photo	Explanation

To replace socket assembly:

6. Disconnect the wires from the socket terminals.
7. Use a screwdriver and bend the clips on the socket away from the edges of the liner hole(there are 6 clips on th e socket), and pull the socket out of the liner. Push the socket out from the rear of the unit.

* Reassembly of All part is the reverse order of disassembly.

3-11 Removing Sensor-Thermistor

WARNING

ELECTRICAL SHOCK HAZARD

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

PRECAUTION

When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

Parts	Explanation Photo	Explanation
Sensor-Thermistor	Lower Sensor	**1.** Turn off the electrical supply going to the range and remove the oven from its mounting location. **2.** Remove oven door and racks from inside the oven. **3.** Unscrew Sensor-Thermistor. **4.** Remove Cover-Back Main Wire and disconnect a wire from Sensor-Thermistor. **5.** Replace the Sensor-Thermistor.

* Reassembly of All part is the reverse order of disassembly.

3-12 Removing Assy-Drawer & Heater-Warming Drawer

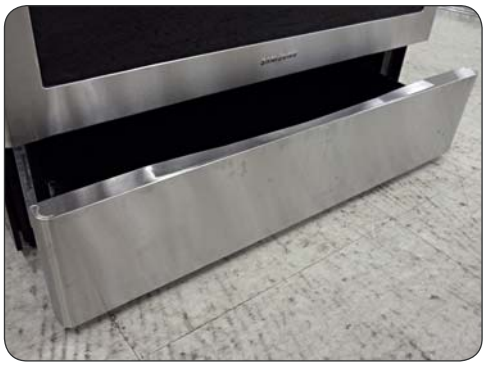
WARNING

ELECTRICAL SHOCK HAZARD

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

PRECAUTION

When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

Parts	Explanation Photo
Assy-Drawer & Heater-Warming Drawer	

Explanation

To remove Assy-Drawer:

1. CAUTION -Turn power OFF before removing the Warming Drawer.
2. Open the drawer to the fully opened position.
3. Locate glide lever on each side of drawer, push down on the left glide lever and pull up on the right glide lever.
4. Pull out the warning drawer.

3-13 Removing and Replacing Oven Door

WARNING

The door is very heavy. Be careful when removing door Do not lift door up by the Handle-Door.

Parts	Explanation Photo	Explanation
Oven door		**To remove Oven Door:** **1.** Fully open the door **2.** Pull the hinge locks downward.
		3. Firmly grasp both side of the door at the top. **4.** Close door to the door removal position, which is approximately 5 degrees. Lift door up and out until the hinge arm are clear of the slot.
	 	To replace door: **1.** Firmly grasp both sides of the door at the top position and insert the hinges into the hinge openings on the oven.
		2. Fully open the door. (If the door will not fully open, it means that the indentation is not seated correctly in the bottom edge of the slot. Push the hinge locks up to the locked position.) **3.** Close the oven door.

* Reassembly of All part is the reverse order of disassembly.

3-14 Removing Handle-Door and Glass-Inner (Continued)

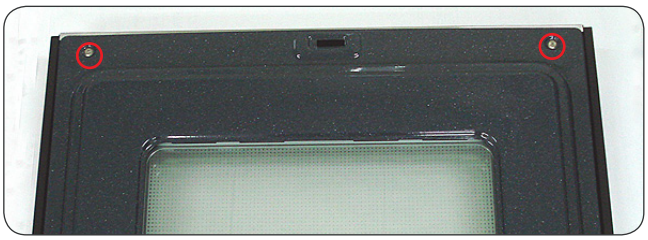
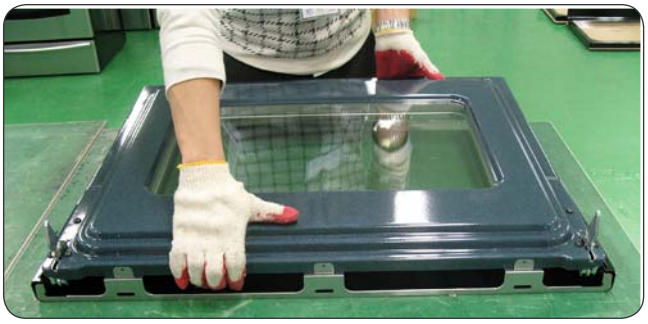
WARNING

ELECTRICAL SHOCK HAZARD

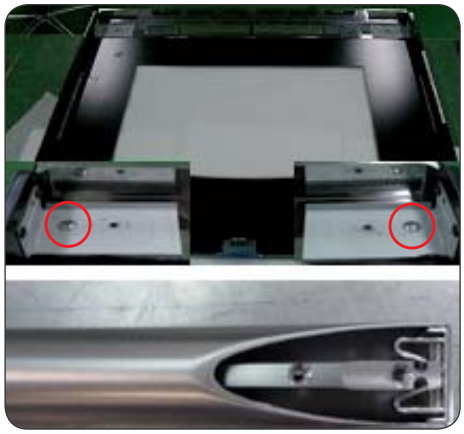
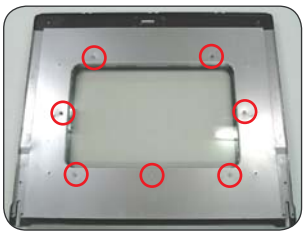
Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

PRECAUTION

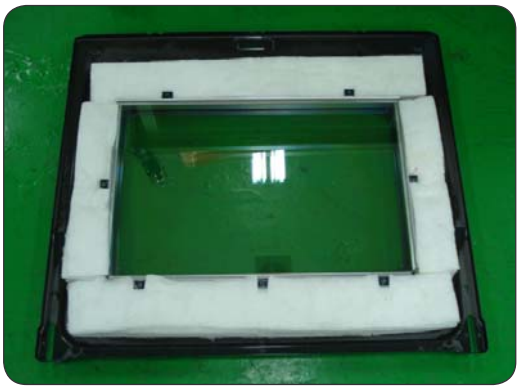
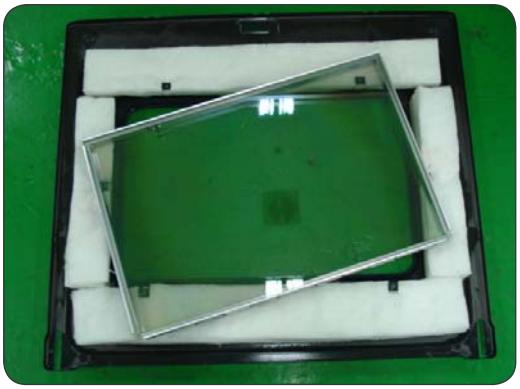
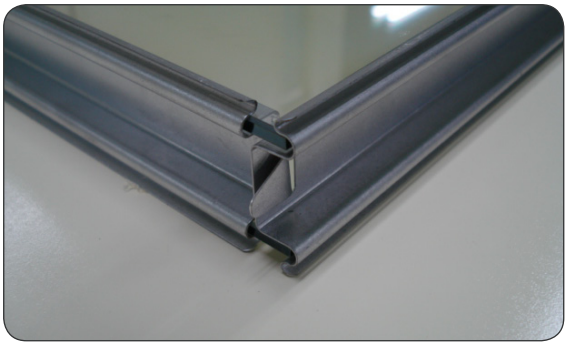
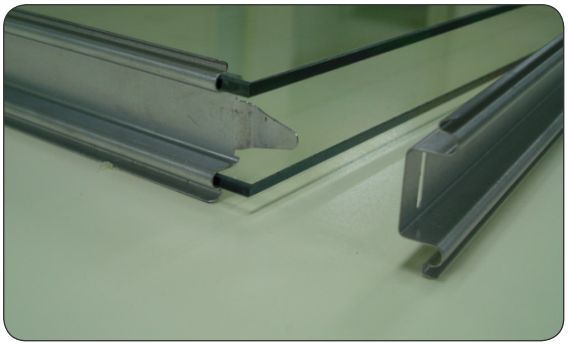
When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

Parts	Explanation Photo	Explanation
Door		**1.** Remove the oven door from the range (see page 29 for the procedure.) **2.** Place the oven door on a padded work surface with the front glass facing down. **3.** Remove 3 bottom screws from the door.
		**4.** Remove 2 Handle-screws from the door.
		**5.** Lift the door rear assembly off the front assembly and set it aside
		6. Remove 2 spacers and 2 screws.

3-14 Removing Handle-Door and Glass-Inner (Continued)

Parts	Explanation Photo	Explanation
Handle Door		**To remove Handle-Door** **1.** Remove 2 screws to remove Handle-Door
Glass-Inner	 	**To remove Glass-Inner** **1.** Remove 6screws from rear side of door to remove 2 Hinge-Door.
		**2.** Remove 4screws ro remove Glass-Inner Sub Assembly **3.** Remove 7screws ro remove Baffle-Door

3-14 Removing Handle-Door and Glass-Inner

<table>
<tr><th>Parts</th><th>Explanation Photo</th></tr>
<tr><td rowspan="5">Handle
Door</td><td>   </td></tr>
<tr><td>Explanation</td></tr>
<tr><td>4. Remove Baffle-Door and take out the Glass-Inner assembly.</td></tr>
<tr><td>Explanation Photo</td></tr>
<tr><td>   </td></tr>
<tr><td>Explanation</td></tr>
<tr><td>5. Unfold 2 flanges of Cover-Frame Inner Glass to taking out Glass-Inner</td></tr>
</table>

* Reassembly of All part is the reverse order of disassembly.

3-15 Removing Gasket-Door

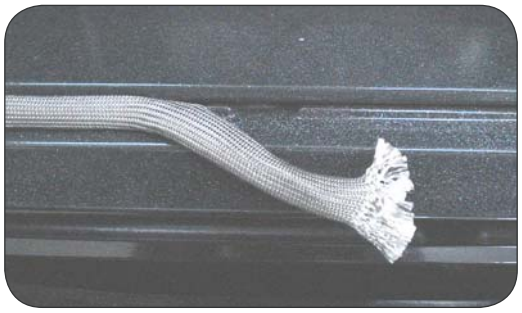
WARNING

ELECTRICAL SHOCK HAZARD

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

PRECAUTION

When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

Parts	Explanation Photo
Gasket door	
	Explanation
	1. Open the oven door to its fully down position. **2.** Pull the ends of the gasket out of the liner holes. **3.** Pull the oven door gasket clips out of the holes until all of the clips are removed.
	REASSEMBLY NOTE: When you install the new gasket, make sure that all of the clips are seated in their liner holes, and that the ends of the gasket are pushed fully into their holes. Use the pointed end of a pencil to push the gasket ends into the holes.

* Reassembly of All part is the reverse order of disassembly.

3-16 Removing The Panel-Side

WARNING

ELECTRICAL SHOCK HAZARD

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

PRECAUTION

When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

Parts	Explanation Photo	Explanation
Panel Side		**1.** Turn off the electrical supply. **2.** Remove the oven door from the range (see page 3-15 for the procedure). **3.** Pull the range away from the wall so you can access the back of the unit. **4.** Remove the 8 screws from the rear of Panel-Side and remove Cooktop. **5.** Remove the (each) 3screws from the top the Panel-Side. **6.** Pull the back of the side panel out from the range approximately 10˚ **7.** Push forward and remove Panel-Side.

* Reassembly of All part is the reverse order of disassembly.

4. Troubleshooting

4-1 Failure Display Codes

There is a error code and two kinds of error codes. Possible error codes during use can be checked before service.

1. Touch '**Clock**' key.

2. Touch a number '**1,2,3,4**' key.

3. Touch '**Oven Start / Set**' key.

4. Touch '**Favorite Cook**' and '**Wake-Up**' keys at the same time for 3seconds. Error codes are displayed.

5. Touch number '**0**' key, the last 5 error codes can be checked. But, if the oven turns off, the stored error codes are deleted.

6. Touch '**Oven Off**' key to return to normal display mode.

Safety error

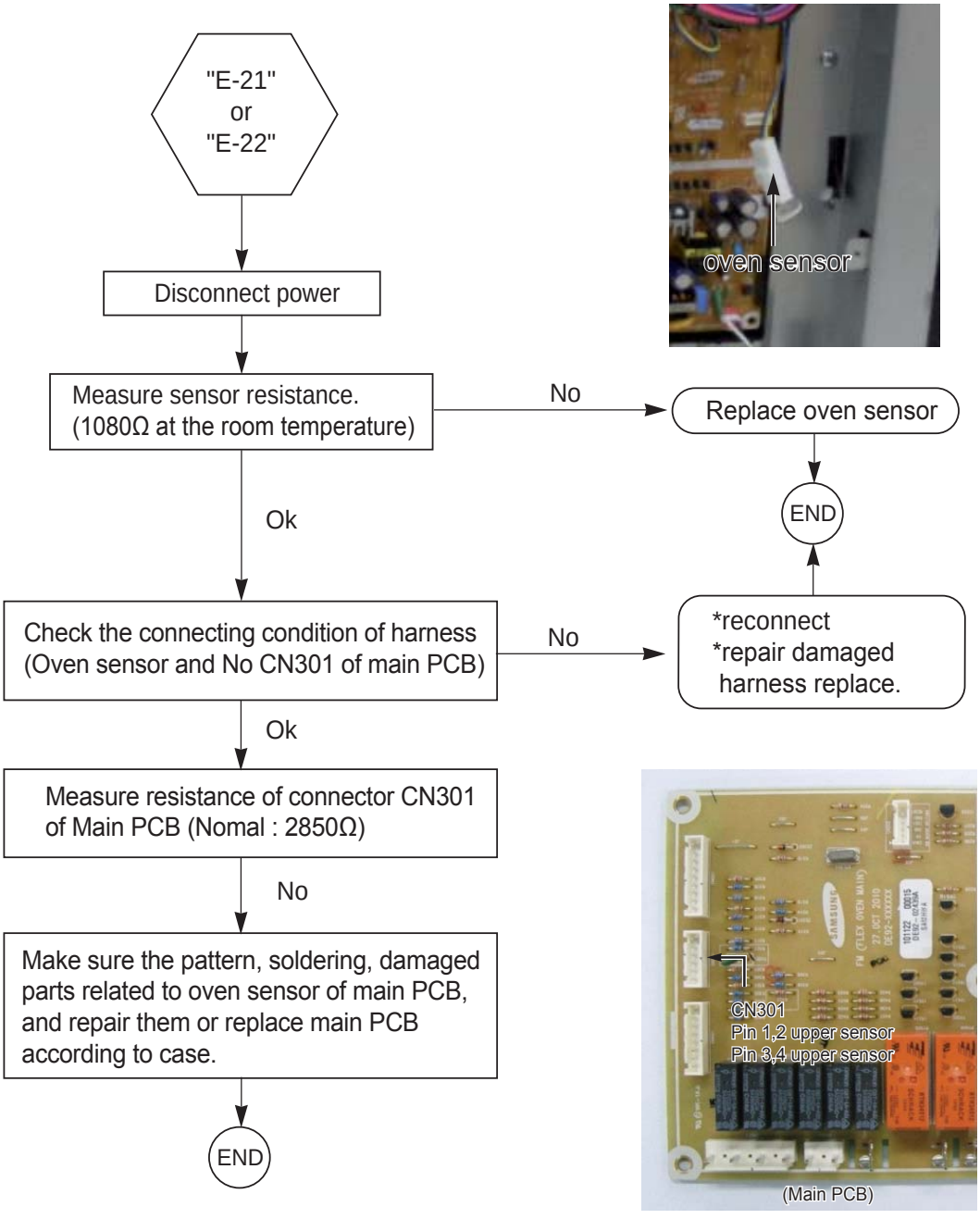
Failure code	CAUSE	SOLUTION
E-24	Oven heating over	1. Disconnect power. Open the back cover.Disconnect sensor harness from control.Measure sensor resistance:1080Ω at the room temperature → If there are any problems, replace oven sensor. 2. Check the broil, bake and convection heater.Check the resistance of the each heater. 3. Check whether DLB of Main PCB, Broil, Bake and Convection heater relay are being worked normally. 4. Check whether there is any disconnection of harness which is linked with main PCB on sub PCB. 5. Check the resistance of oven sensor connector on main PCB. (Normal : 2850Ω) 6. It will display "E-24" after beeping 10 times Bzlong, if temperature is more than 600°F(316℃) during oven is working excluding the case of self-cleaning. 7. Please make sure through the method of 4-1 on 29 page, if those series of working for informing error take long time or not functioned."
E-0E	Door locking error	1. Disconnect power. Open the back cover. Check wether harness has been connected with door lock switch and motor. 2. Confirm whether resistance value of door lock motor is to be normal one or not. 3. With operating door lockout, measure a voltage of connector on harness which is linked with door lock motor. (Normal Voltage : AC 120V) 4. Check whether door locking switch is being worked normally.

4. Troubleshooting

4-1 Failure Display Codes

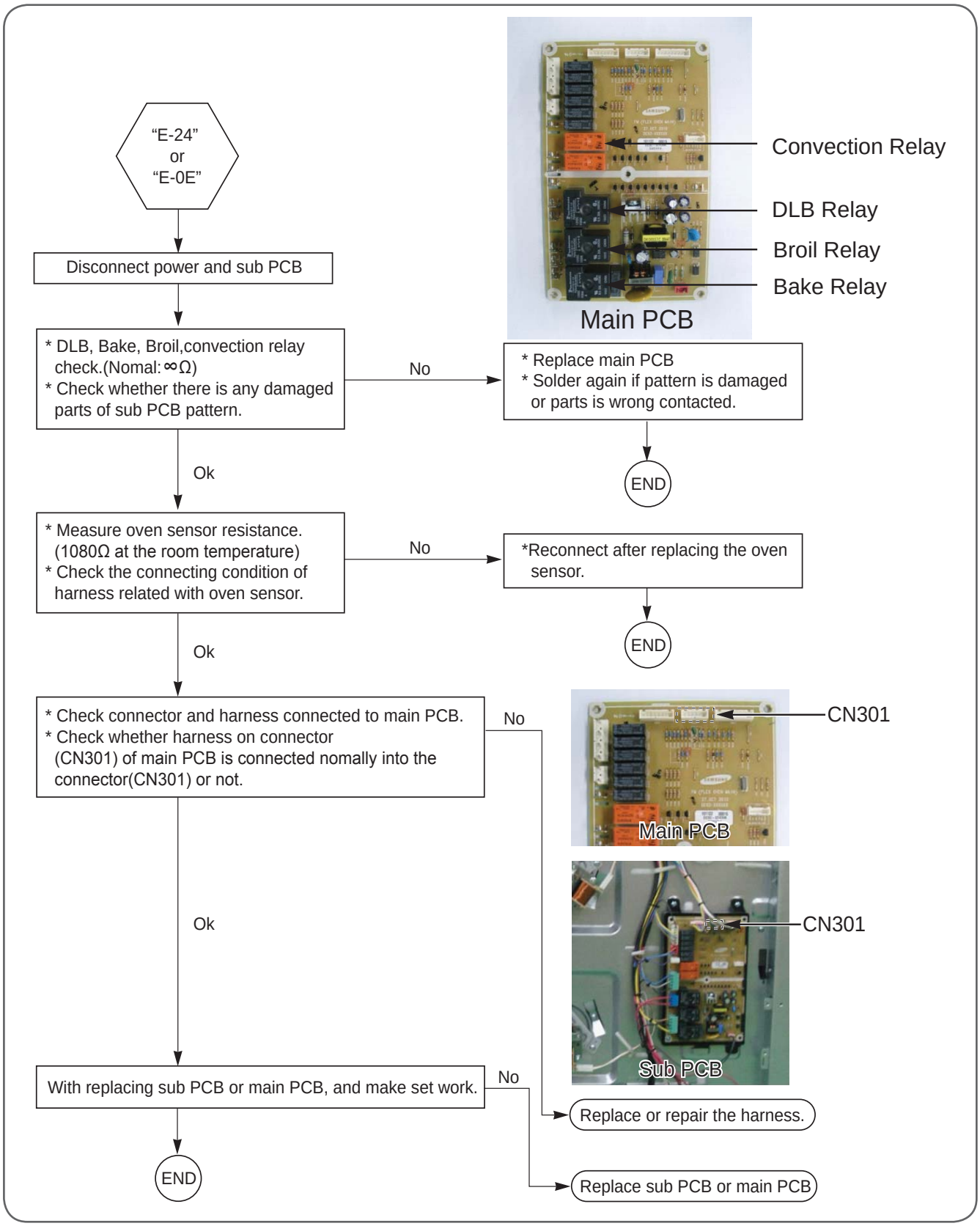
Failure code	CAUSE	SOLUTION
E-21	Oven sensor opened (Over 2950Ω)	1. Check whether connector(CN201) of main PCB has been inserted. 2. Check whether connector(CN02) of Sub PCB has been inserted. 3. If there is not a problem occurred with connector on Sub PCB and main PCB, replace the main PCB.
E-22	Oven sensor shorted (Under 940Ω)	
E-83	Main PCB communication error	1. Check whether connector(CN201) of main PCB has been inserted. 2. Check whether connector(CN02) of Sub PCB has been inserted. 3. If there is not a problem occurred with connector on Sub PCB and main PCB, replace the main PCB.
-tE-	Sub PCB communication error	1. Check whether connector(TE201) of SUB PCB has been inserted. 2. If there is not a problem occurred with connector on Sub PCB and Touch glass, replace the Control box.
-SE-	Key short	1. Check whether cable of keypad has been inserted into connector of Sub PCB. 2. Check whether between Sub PCB and connector or keypad and cable have a short circuit. 3. If there is not a problem occurred with connector on Sub PCB and cable of keypad, replace the Sub PCB.
E-2E	Probe short	1. Disconnect power. Open the back cover. Disconnect Probe harness from control Measure probe resistance : 50kΩ at the room temperature → If there are any problems, replace meat probe. 2. If there is not any problem with meat probe, Please check whether there is a damaged therminal or wire on harness. 3. Check resistance of meat probe connector on main PCB (Normal:10kΩ ~ 11kΩ)

4-1 Failure Display Codes

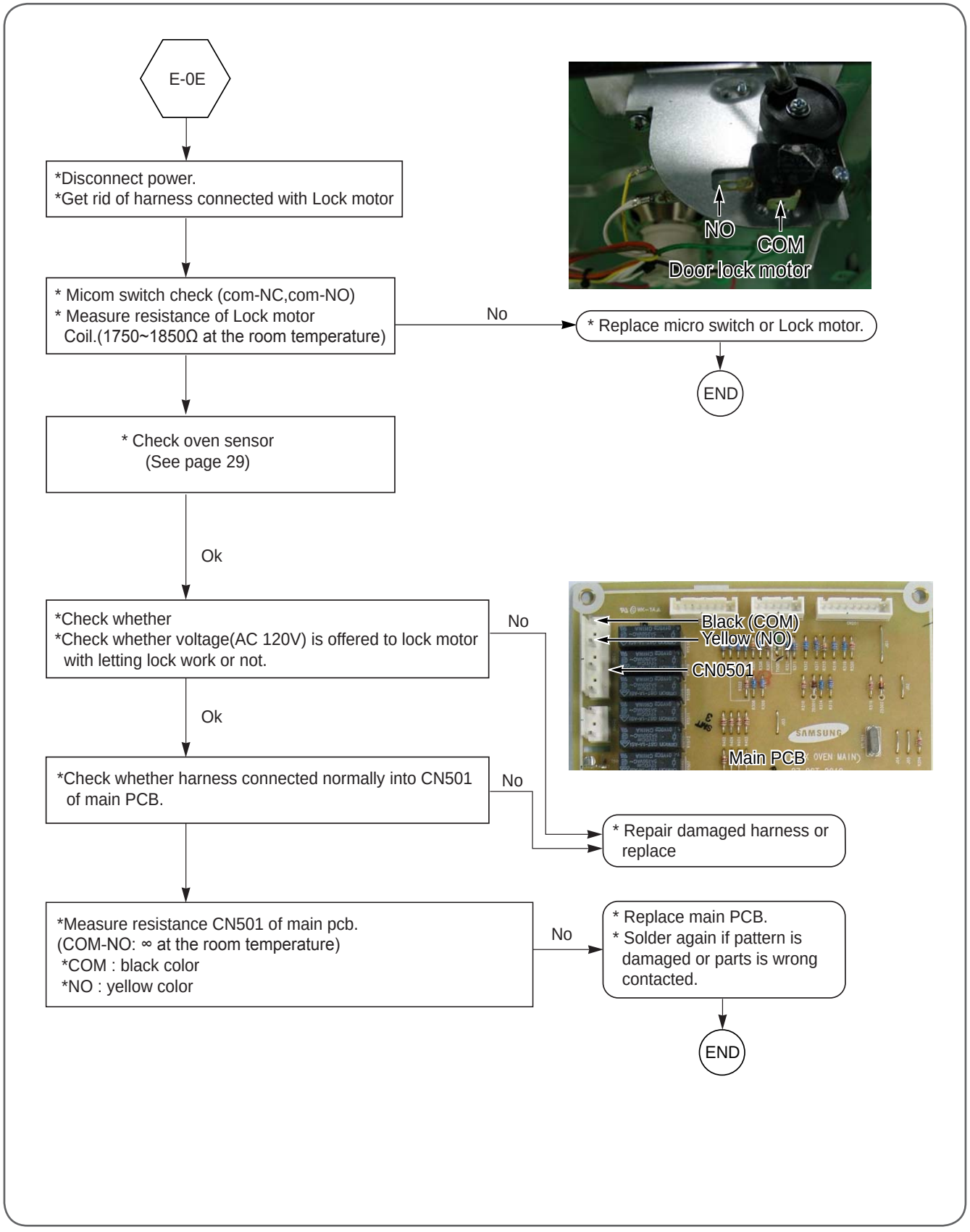


4-1 Failure Display Codes

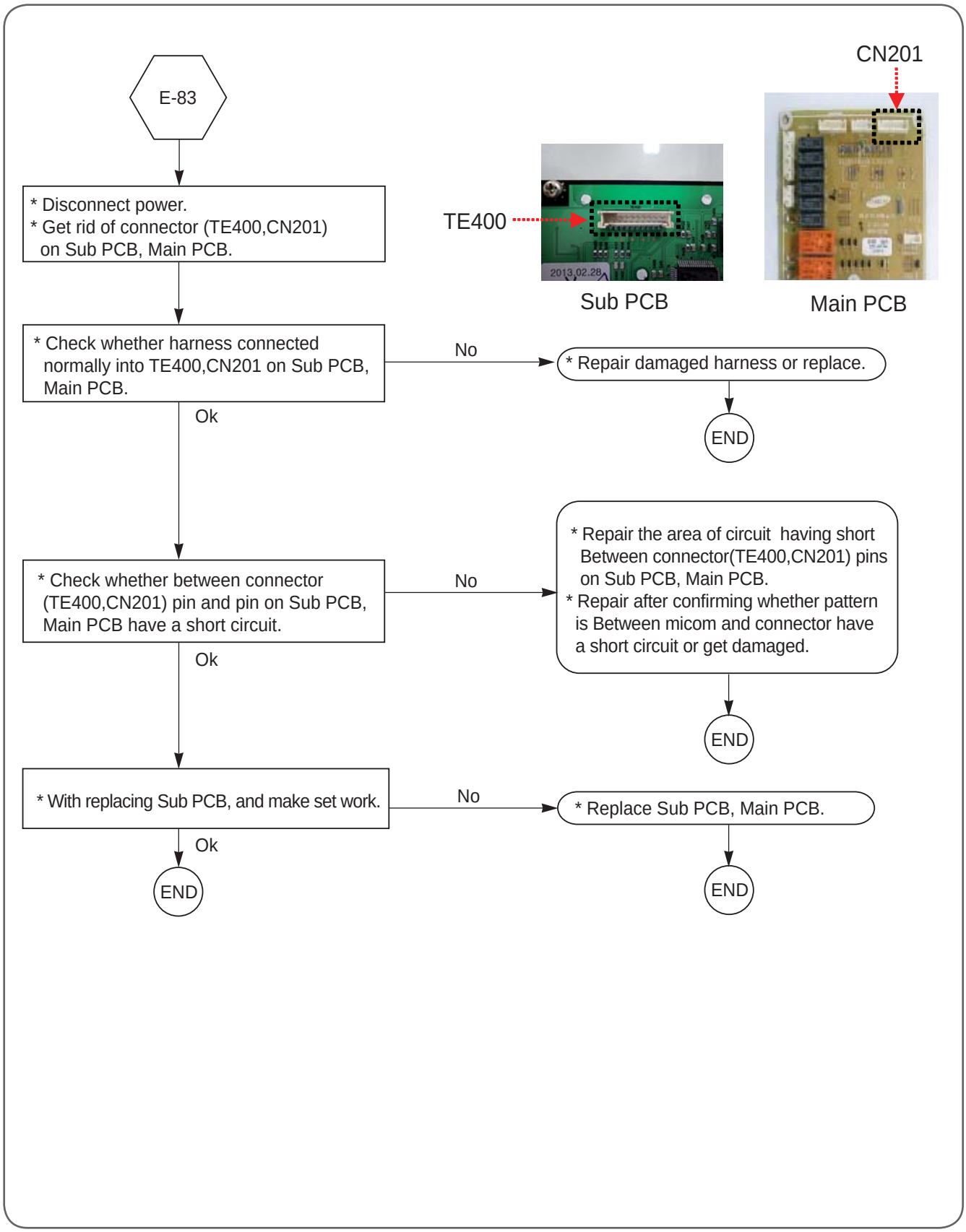
Safety error


"E-24"
or
"E-0E"
Disconnect power and sub PCB
* DLB, Bake, Broil,convection relay check.(Nomal: ∞Ω)
* Check whether there is any damaged parts of sub PCB pattern.
No
* Replace main PCB
* Solder again if pattern is damaged or parts is wrong contacted.
END
Ok
* Measure oven sensor resistance. (1080Ω at the room temperature)
* Check the connecting condition of harness related with oven sensor.
No
*Reconnect after replacing the oven sensor.
END
Ok
* Check connector and harness connected to main PCB.
* Check whether harness on connector (CN301) of main PCB is connected nomally into the connector(CN301) or not.
No
Ok
With replacing sub PCB or main PCB, and make set work.
No
END
Replace or repair the harness.
Replace sub PCB or main PCB
Convection Relay
DLB Relay
Broil Relay
Bake Relay
Main PCB
CN301
Main PCB
CN301
Sub PCB

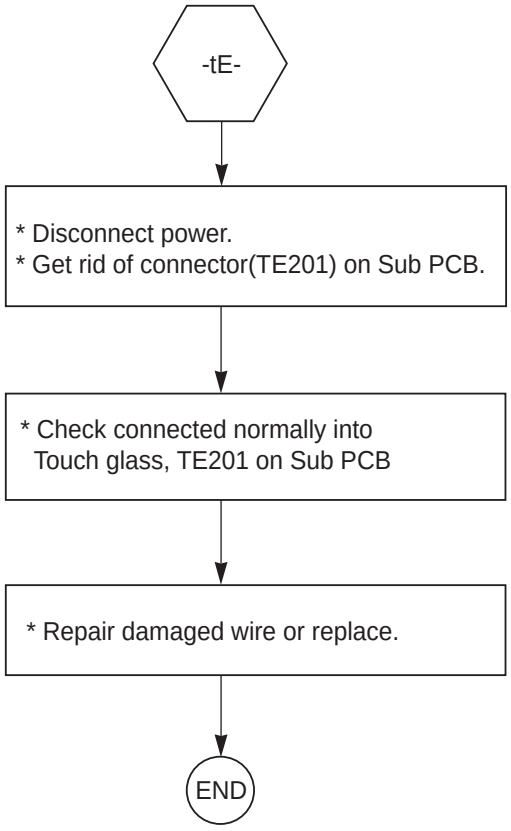
4-1 Failure Display Codes

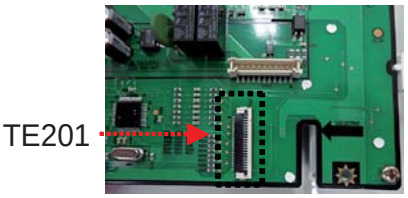


4-1 Failure Display Codes


E-83
* Disconnect power.
* Get rid of connector (TE400,CN201) on Sub PCB, Main PCB.
* Check whether harness connected normally into TE400,CN201 on Sub PCB, Main PCB.
No
* Repair damaged harness or replace.
END
Ok
* Check whether between connector (TE400,CN201) pin and pin on Sub PCB, Main PCB have a short circuit.
No
* Repair the area of circuit having short Between connector(TE400,CN201) pins on Sub PCB, Main PCB.
* Repair after confirming whether pattern is Between micom and connector have a short circuit or get damaged.
END
Ok
* With replacing Sub PCB, and make set work.
No
* Replace Sub PCB, Main PCB.
END
Ok
END
TE400
Sub PCB
CN201
Main PCB

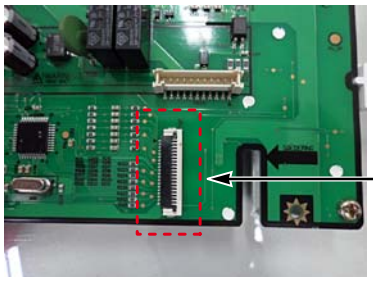
4-1 Failure Display Codes


-tE-
* Disconnect power.
* Get rid of connector(TE201) on Sub PCB.
* Check connected normally into
Touch glass, TE201 on Sub PCB
* Repair damaged wire or replace.
END



Sub PCB

4-1 Failure Display Codes



- SE -

*Disconnect power.
*Take out keypad cable from the Sub PCB.

* Check whether between connector(TE201) pin and pin on sub PCB have a short circuit.

No

* Repair the area of circuit having short between connector(TE201) pins on Sub PCB.
* Repair after confirming whether pattern is between micom and connector have a short circuit or get damaged.

END

Ok

*Make sure whether between keypad and cable have a short circuit.

No

* Replace or repair keypad

END

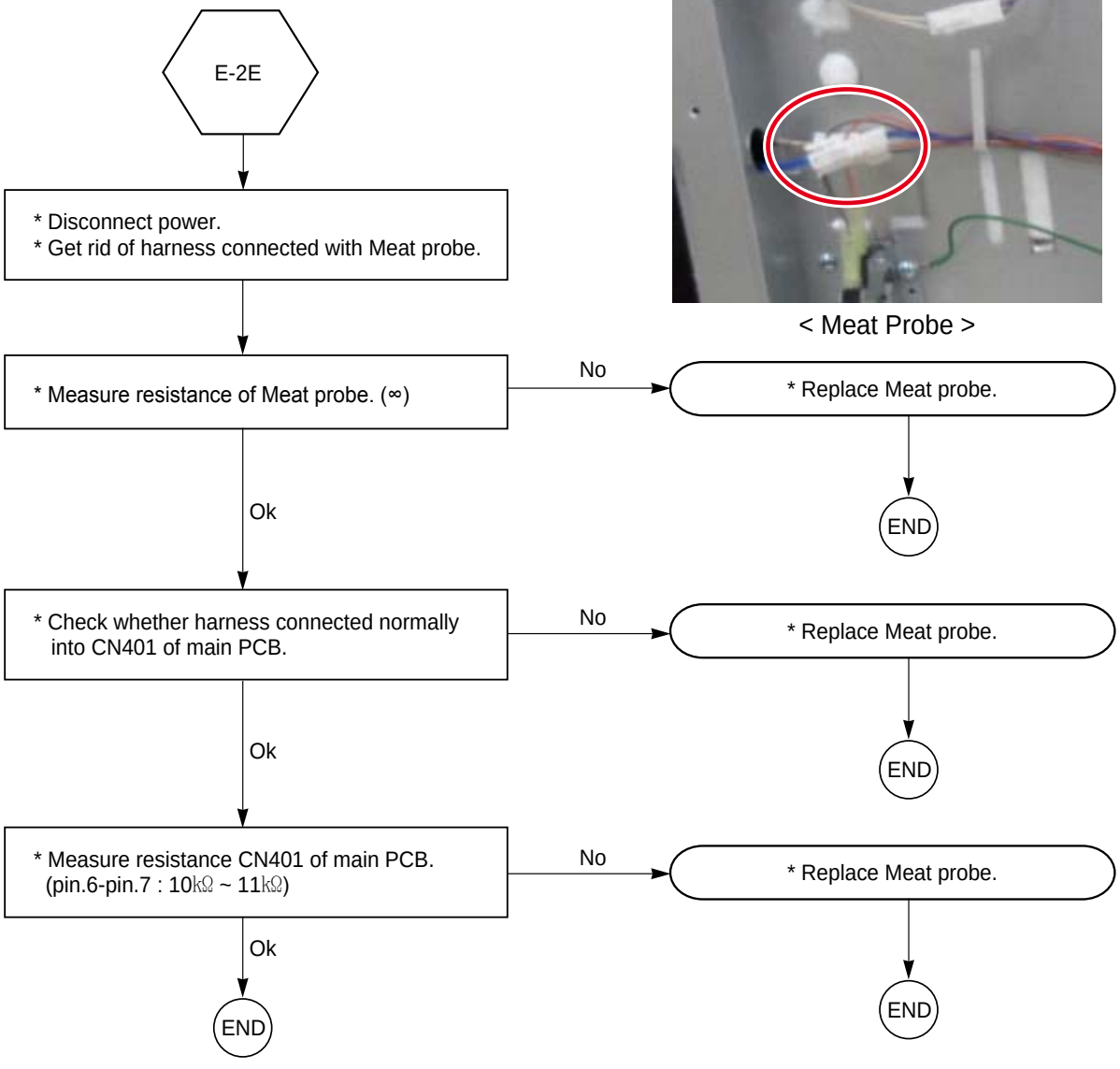
Ok

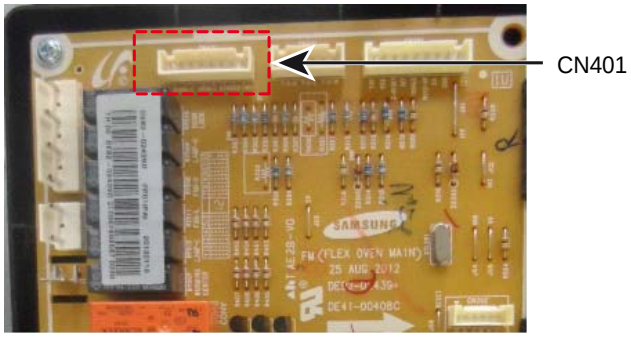
*Replace Control PCB. (Touch Control PCB+Glass)

END

4-1 Failure Display Codes

< Meat Probe >

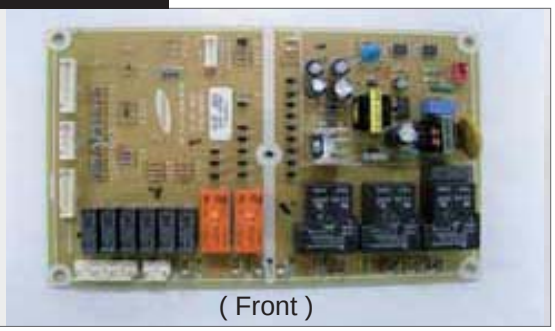




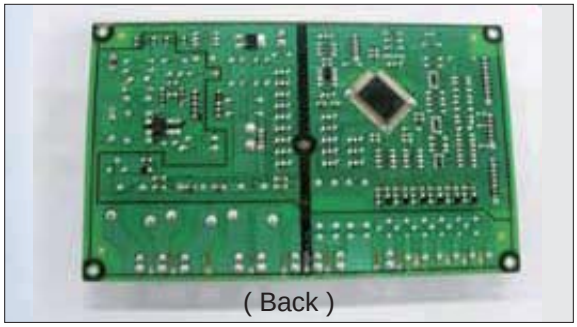
Control PCB Operation

Sort of Control PCB

Main PCB

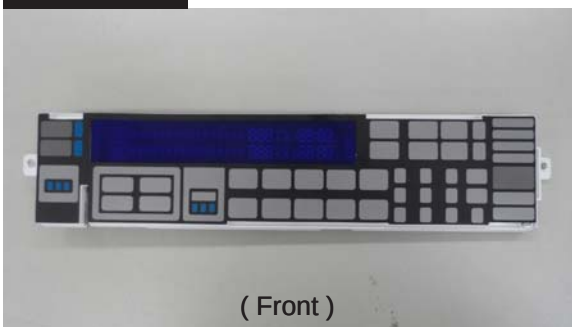


(Front)

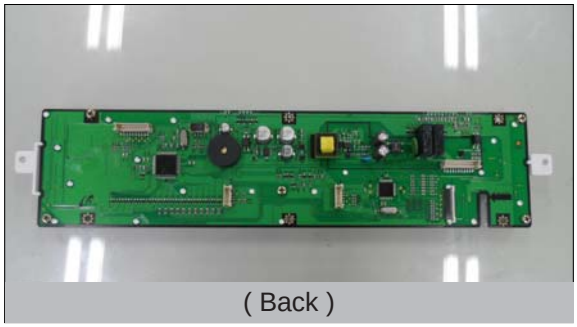


(Back)

Sub PCB

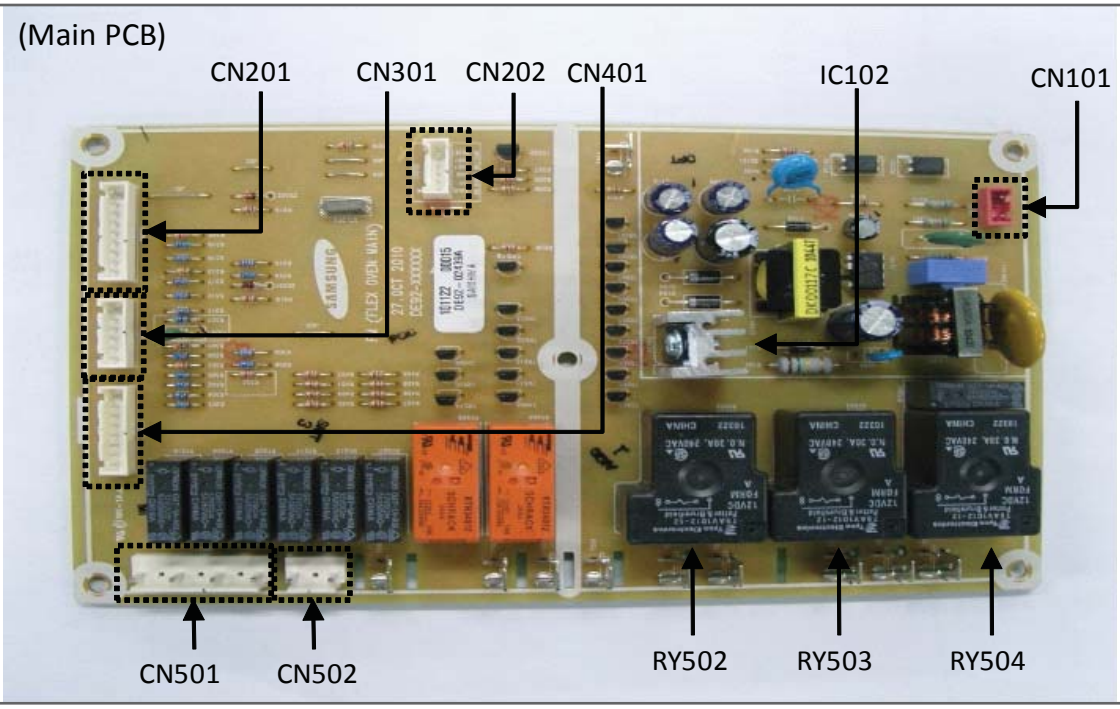


(Front)



(Back)

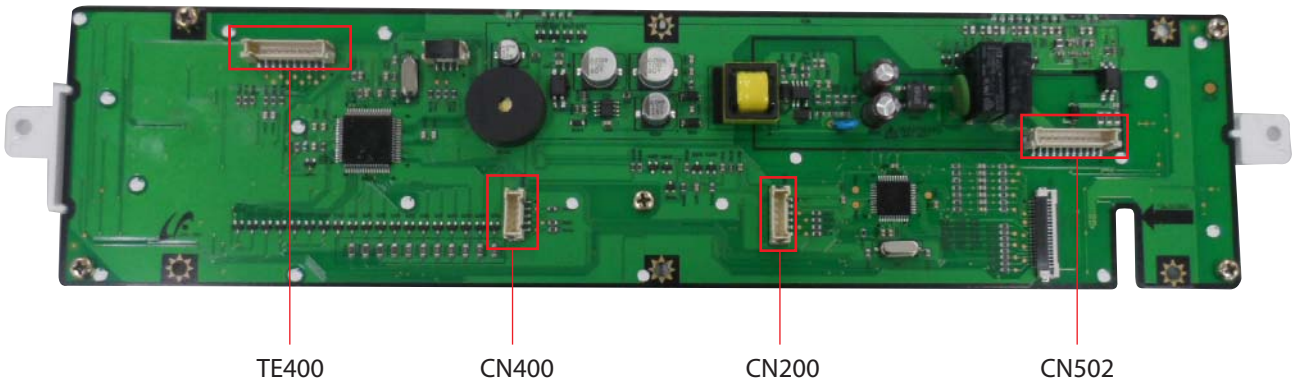
Explain of primary parts of Main PCB



Explatin of the function of primary parts.

CN101	This is to supply power with SMPS.
CN201	This is connector which is connected with Sub PCB to communicate.
CN202	When do micom revision, connect to micom writer. And this connector which is connected with Touch PCB to communicate.
CN301	This connector which is connected with oven sensor.
CN401	This is connector which is connected with Door plunger switch and Door lock switch, partition switch.
CN501	This connector which have Door plunger switch, upper lamp and relay of upper convection fan connected.
CN502	This connector which have lower lamp and relay of lower convection fan connected.
RY-Source Relay(RY501)	This is relay which control source of DLB,BAKE,BROIL, W/Drawer relay.
DLB Relay(RY502)	Circuit is designed to have broil relay or convection relay worked after DLB relay is being worked by Double line break. (It will not be problem with reversing the order in inserting Red)
Broil Relay(RY503), Bake Relay(RY504), Relay(RY505)	Broil relay(Ry503), Bake relay(Ry504), convection relay(Ry505) will be on-off working by mi-com signal after DLB relay is worked. (Broil relay : It will not be problem with reversing the order in inserting Brown) (Bake relay : It will not be problem with reversing the order in inserting Blue)
IC102	This is to supply DC 12V with main PCB by voltage regulator.

Explain primary parts of Sub PCB



Explatin of the function of primary parts.

TE400	This is connector which is connected with Main PCB to communicate.
CN400	When do micom revision, connect to micom writer. (No connection at normal times)
CN200	When do micom revision, connect to micom writer. (No connection at normal times)
CN502	This is connector which is connected with cooktop and Main cooling motor.

4. Troubleshooting

SYMPTOM	DIAGNOSIS	REMEDY
Oven not operating (No power, No display)	* Measure an input voltage. (240/120V or 208/120V) * Measure an input voltage of terminal block.	* Check circuit breaker. * Make sure that the state of wire is connected with Terminal block.
	* Measure voltage of connector(CN08,CN09) on main PCB L1~N : 120V * Measure secondary voltage of Low Voltage Transformer. Red + Red color : 13.5V Yellow + Yellow color : 8V	* Replace of repair if harness has been loosen or disconnected. * Replace if resistance of Low voltage transformer primary coil is over MΩ. (Thermal Fuse out)
	* Make sure that the relay on sub PCB is being worked normally. * Make sure whether harness between connector (CN04,CN05) on sub PCB and connector (CN04,CN05) on main PCB has been loosen or disconnected.	* Replace sub PCB if relay has been damaged or there is any cracking on the sub PCB. * Repair harness is connected main PCB with sub PCB. * After confirming whether harness has been inserted into relay on sub PCB or not, take action follow as; - Replace or repair harness. - Replace or repair sub PCB.
	* Measure resistance both ends of terminal on thermostat. (normal : 0 ohoms) * Check whether harness is connected terminal on thermostat has been loosen or disconnected. * Measure voltage regulator (IC02,IC03) on main PCB. - IC02 : 7812(DC 12V) - IC03 : 7805(DC 5V)	* Replace the thermostat. * Replace or repair harness. * Replace or repair after confirming the state of working of main PCB.
Oven temperature is risen slowly.	* It will display “E-08” if it fail to reach 100˚F(38˚C) within 10 minute in a state of room temperature.	* Replace after checking whether there is any problem with oven sensor. (1080Ω at the Room temperature)
	* Make sure whether harness is connected with Broil, Bake and convection heater has been loosen or disconnected.	* Repair and replace harness.
	* Make sure whether Broil, Bake, and convection heater has been disconnected.	* After taking out terminal from each heater, measure resistance of heater and then replace that if it is not a normal resistance value.
	* Make sure that heater relay and pattern on sub PCB.	* Replace or repair relay. * Replace or repair sub PCB.

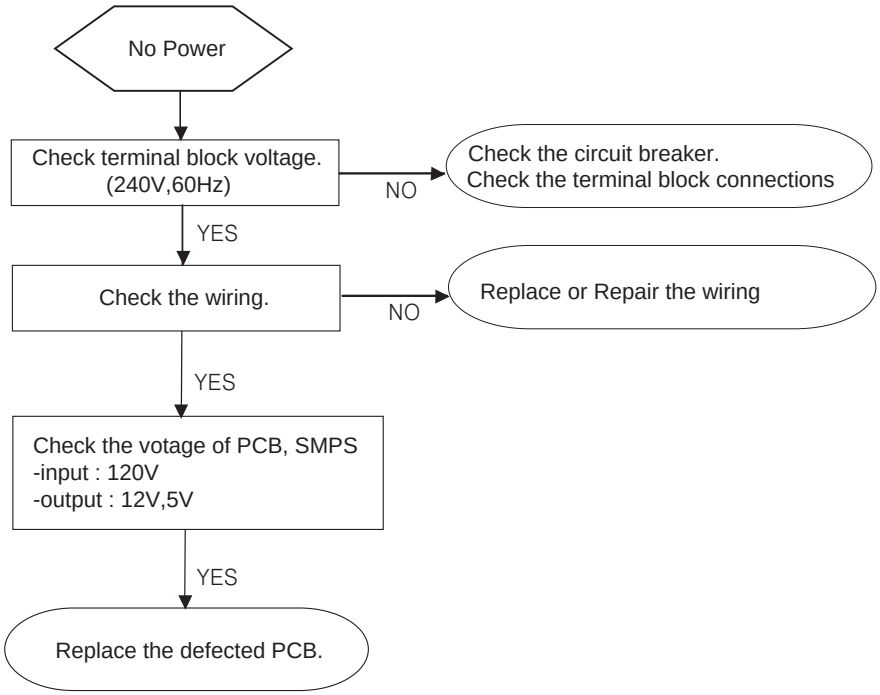
4. Troubleshooting

SYMPTOM	DIAGNOSIS	REMEDY
Oven temperature is risen fast.	* Check whether temperature is risen over 400˚F(202˚C) within 10 minutes in a state of room temperature.	* Replace or repair it if relay on sub PCB or main have a short circuit.
	* Check whether harness has been misconnected or have a short circuit.	* Replace or repair harness.
	* Measure resistance values of each heater are within a normal extent or not.	* Replace heater is in a abnormal state.
The self-cleaning feature will not operate when warming center or warming drawer is on.	* This is in normal state.	* The self-cleaning feature will not operate when warming center or warming drawer is on.
Keypad is not worked normally in partially or entirely.	Make sure that keypad cable on touch PCB is in normal state.	* Replace after confirming whether it has been loosen or disconnected.
	Make sure connector (CN07) on main PCB or PCB pattern.	* Replace or repair after confirming whether keypad cable has been loosen or disconnted.
	Check whether touch control PCB has been damaged.	* Replace assembly of touch control pcb. (PCB + Glass touch)
Warmer drawer heating is not working.	* Check warmer drawer relay (Ry06) on sub PCB and terminal(T03).	* Replace terminal(T03) or relay(Ry06). * Replace sub PCB.
	* Measure whether resistance value of warmer drawer heater is in normal extent or not.	* Replace warmer drawer heater.
Oven lamp is not working.	* Check the oven lamp relay (Ry09) on sub PCB and connector (CN01).	* Replace or repair if harness has been loosen or disconnected. * Replace oven lamp relay(Ry09) or Ry-source relay.(Ry01) * Replace Sub PCB.
	Measure the resistance value of both ends of lamp terminal.	* Replace lamp if it has been disconnected. (120V / 40W)

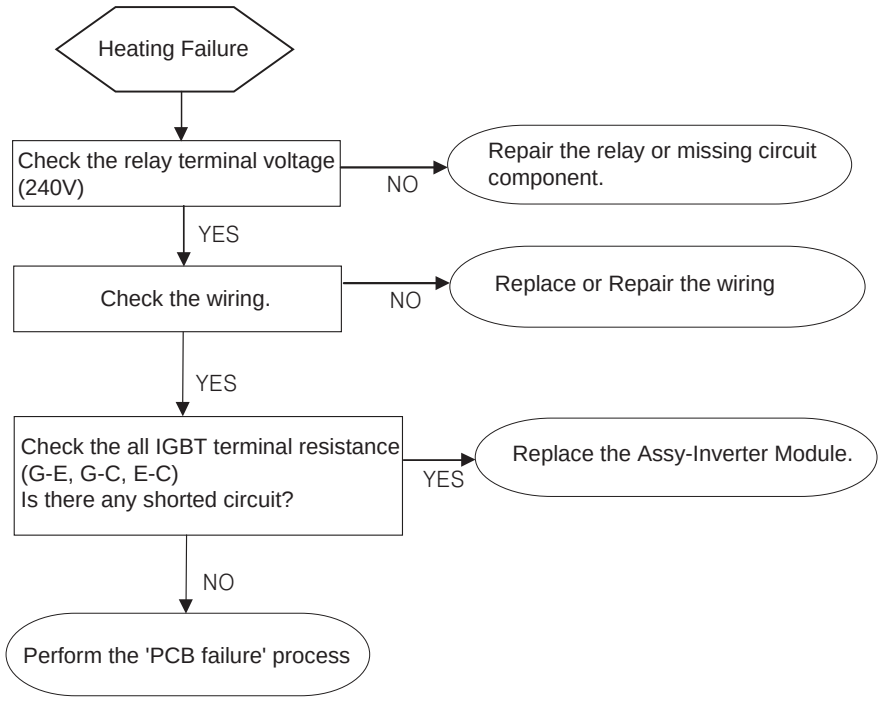
SYMPTOM	DIAGNOSIS	REMEDY
Convection fan is not rotated.	Check whether Convection fan relay (Ry08) on sub PCB and connector(CN01) is in normal.	* Replace or repair Relay. * Replace or repair connector.
	Make sure whether harness between connector(CN04, CN05) on sub PCB and connector(CN04, CN05) on main PCB has been connected normally.	* Replace or repair harness. * Replace or repair connector. * Replace sub PCB.
It has smell or smoke when oven has been started initially.	This is in normal state.	* It has smell or smoke with burning dirt in oven or a foreign substance when oven has been working initially. * Ventilate after getting self cleaning mode to work.
LED display is a little bit dim partially or invisible entirely.	* LED display is inferior.	* Replace main PCB.
There is not buzzer beep sound when keypad is being worked.	Check the state of buzzer on main PCB and whether PCB pattern have a short circuit or has been open.	* Replace or repair main PCB.

4-2 Electrical Malfunction

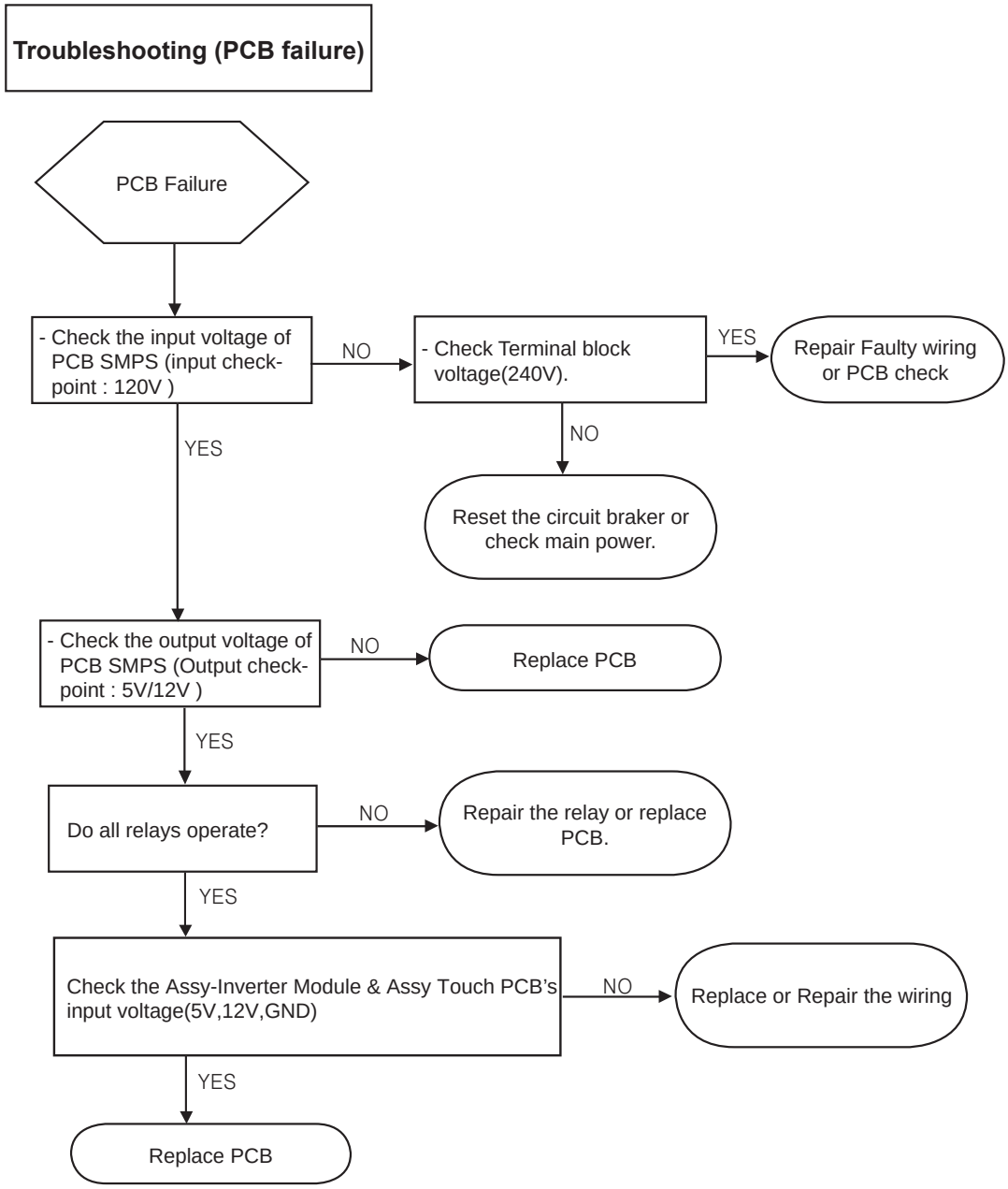
Troubleshooting (Power)



Troubleshooting (Heating)



4-2 Electrical Malfunction

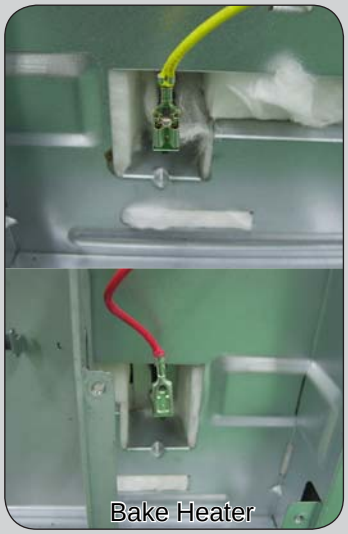


4-2 Electrical Malfunction

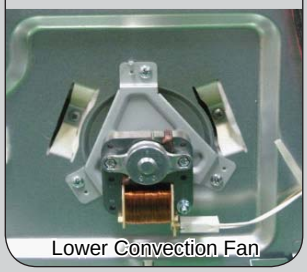
Component testing procedures

WARNING

ELECTRICAL SHOCK HAZARD
Disconnect power before servicing the range. Replace all panels before operating range.
Failure to do so can result in death or electrical shock.

FIGURE	TESTS MEASURE	RESULTS
Broil Heater	* Measure resistance values of heater's terminal after taking off harness from heater. * Measure voltage of heater's terminal after making oven work by pressing broil keypad.	* Approx : 13 ~ 16Ω (at the room temperature) * Terminal voltage of Broil heater : AC 240V * Replace or repair harness * Replace or repair sub PCB
 Bake Heater	* Measure resistance values of heater's terminal after taking off harness from heater. * Measure voltage of heater's terminal after making oven work by pressing bake keypad. (Make sure that voltage has to be measured for more than 1 minute because heater is supposed to on-off cycling work.)	* Approx : 26 ~ 30Ω (at the room temperature) * Terminal voltage of bake heater : AC 240V * Replace or repair harness * Replace or repair sub PCB
	* Measure the resistance values of heater's terminal after taking off harness from heater. * Measure the voltage of heater's terminal after having oven worked, by pressing convection bake keypad. (Make sure that voltage has to be measured for more than 1 minute because heater is supposed to on-off cycling work.)	* Approx : 70 ~ 73Ω(at the room temperature) * Terminal voltage of convection heater : AC 240V * Replace or repair harness * Replace or repair sub PCB

4-2 Electrical Malfunction

FIGURE	TESTS MEASURE	RESULTS
	* Measure the state of micro switch and motor after taking off harness from the heater. * Check whether the lock works normally by pressing cooking time button and delay start keypad at the same time for 3 seconds.	* Lock motor Resistance : 1750 ~ 1850Ω (at the room temperature) voltage : 120V * Micro switch COM-NO * Replace or repair if harness has been loosen or disconnected.
	* First of all, make sure that lamp filament is disconnected or not. * Measure resistance socket's terminal after separating harness from heater and removing lamp. * Measure the voltage at the lamp sockets terminal, after turning on the Lamp by pressing the Oven light on the main keypad.	* Approx : ∞Ω * Terminal voltage of lamp socket : 120V * Replace or repair harness. * Replace or repair sub PCB
 Upper Convection Fan  Lower Convection Fan	* Measure resistance value of Motor terminal after taking off harness from Motor. * Measure Voltage of Motor's terminal after making oven work by pressing bake keypad. (Make sure that voltage has to be measured for more than 1 minute because Fan is supposed to on-off Cycling work.)	**Approx** * Convection Fan : 20 ~ 30Ω * Terminal Voltage of Convection Fan : 120V * Replace or repair harness * Replace or repair main PCB.

4-2 Electrical Malfunction

FIGURE	TESTS MEASURE	RESULTS
Door plunger switch	* Check the state of working of switch. * Make sure whether wire, housing and terminal is connected with switch has been damaged or not.	Nomal open : 0Ω Nomal close : ∞Ω * Replace or repair if wire or terminal has been damaged.
	* Check whether the resistance values of oven sensor is same with a chart's one. * Check whether wire or housing has been loosen or disconnected.	**Approx.** at the room temperature :1080Ω

4-2 Electrical Malfunction

Oven sensor resistance (Temperature vs. Sensor resistance)

Ro = 1000 Ohms (0˚C), RP = 2757 Ohms, Up = 5V, a = 0.00375

degree F	degree C	ohms	degree F	degree C	ohms
0	-17.8	932.12	113	45	1170.17
14	-10	961.86	122	50	1188.93
23	-5	980.95	212	100	1374.93
32	0	1000.00	302	150	1558.01
41	5	1019.02	392	200	1738.06
50	10	1038.02	482	250	1915.39
59	15	1056.99	572	300	2089.69
68	20	1075.92	662	350	2261.07
77	25	1094.83	752	400	2429.52
86	30	1113.71	842	450	2595.05
95	35	1132.56	932	500	2757.65
104	40	1151.38	1000	538	2878.57

5-1 PCB Diagrams (Main)

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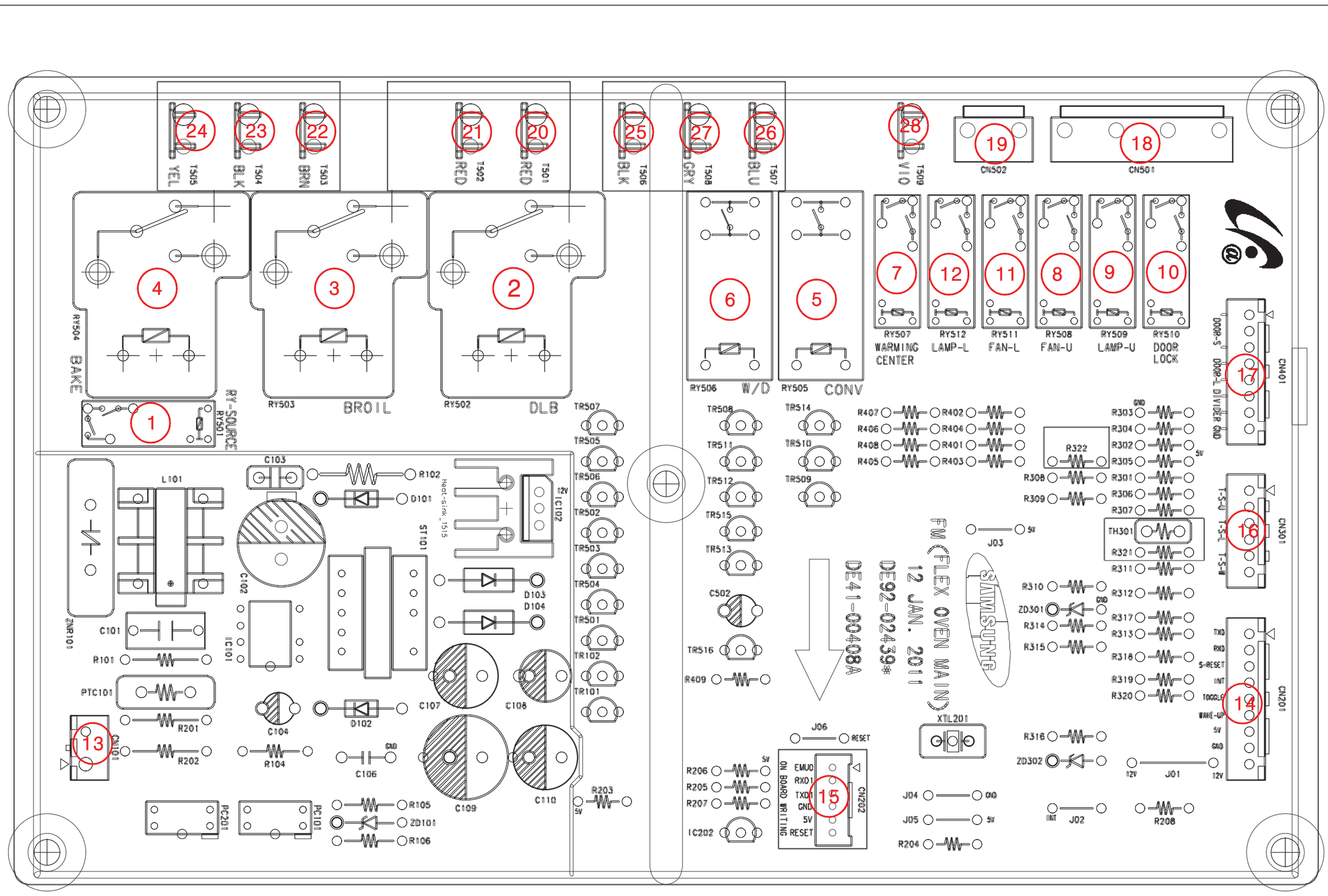

No.	Parts Number	Part Name	Function and Rule
1	RY501	RY-Source Relay	This is relay which control source of DLB,BAKE,BROIL, W/Drawer relay.
2	RY502	DLB Relay	Circuit is designed to have broil relay or convection relay worked after DLB relay is being worked by Double line break. (It will not be problem with reversing the order in inserting Red)
3	RY503	Broil-Heater Relay	"Broil relay(Ry503), Bake relay(Ry504), convection relay(Ry505) will be on-off working by mi-com signal after DLB relay is worked. (Broil relay : It will not be problem with reversing the order in inserting Brown) (Bake relay : It will not be problem with reversing the order in inserting Blue)
4	RY504	Bake-Heater Relay	
5	RY505	Conv-Heater Relay	
6	RY506	WD-Heater Relay	This is Relay to control Warming Drawer-Heater.
7	RY507	WC-Heater Relay	This is Relay to control Warming Centor-Heater.
8	RY508	Conv-Fan-U Relay	This is relay which is connected with Conv. Fan.
9	RY509	Conv-Lamp-U Relay	This is relay which is connected with Conv-Lamp-Upper
10	RY510	Door Lock Relay	This is relay which is connected with door lock motor.
11	RY511	Oven-Fan-L Relay	This is relay which is connected with Oven-Fan-Low.
12	RY512	Oven-Lamp-L Relay	This is relay which is connected with Oven-Lamp-Low.
13	CN101	Power Connector	This is to supply power with SMPS.
14	CN201	Sub Communication Connector	This is connector which is connected with Sub PCB to communicate.
15	CN202	On Board Writing Connector	When do micom revision, connect to micom writer. And this connector which is connected with Touch PCB to communicate.
16	CN301	Oven Sensing Connector	This connector which is connected with oven sensor.
17	CN401	Door Lock, Divider Connector	This is connector which is connected with Door plung switch and Door lock switch, divider switch.
18	CN501	Relay Connector	This connector which have Door plunger switch, upper lamp and relay of upper convection fan connected.
19	CN502	Relay Connector	This connector which have lower lamp and relay of lower convection fan connected
20	T501	DLB Terminal	This is terminal to connect harness with DLB relay.
21	T502		
22	T503	Broil Terminal	This is terminal to connect harness with Broil relay.
23	T504		
24	T505	Bake Terminal	This is terminal to connect harness with Bake relay.
25	T506	Convection-Heater Terminal	This is terminal to connect harness with convection-heater relay.
26	T507		
27	T508	WD-Heater Terminal	This is terminal to connect harness with relay to get heater on warming drawer work.
28	T509	WC-Heater Termainal	This is terminal to connect harness with relay to get heater on warming centor work.

5-2 PCB Diagrams (Sub)

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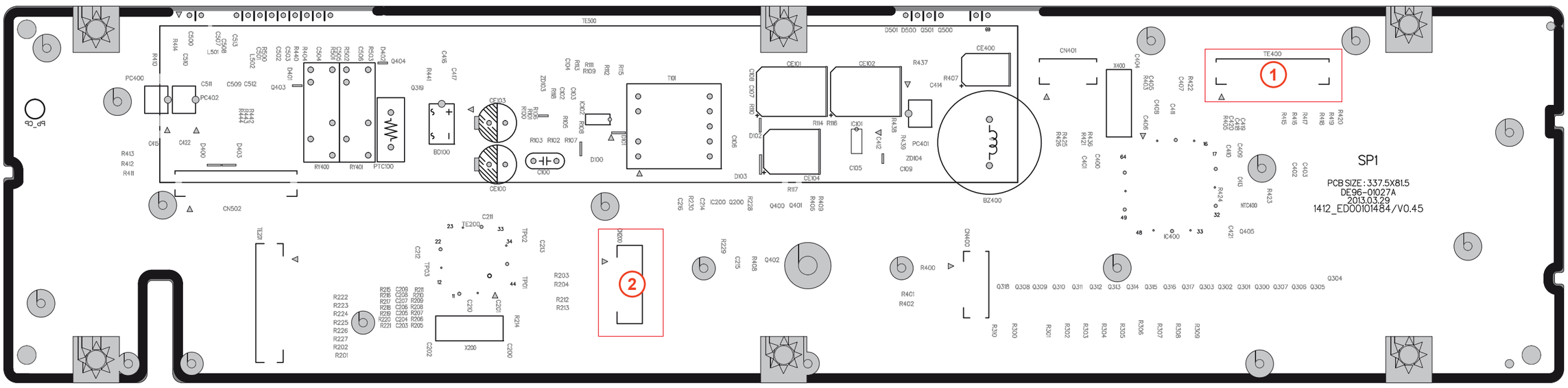

No.	Parts Number	Part Name	Function and Rule
1	TE400	Main Communication Connector	This is connector which is connected with Main PCB to communicate.
2	CN200	On Board Writing Connector	When do micom revision, connect to micom writer. (No connection at normal times)

6-1 Wiring diagram

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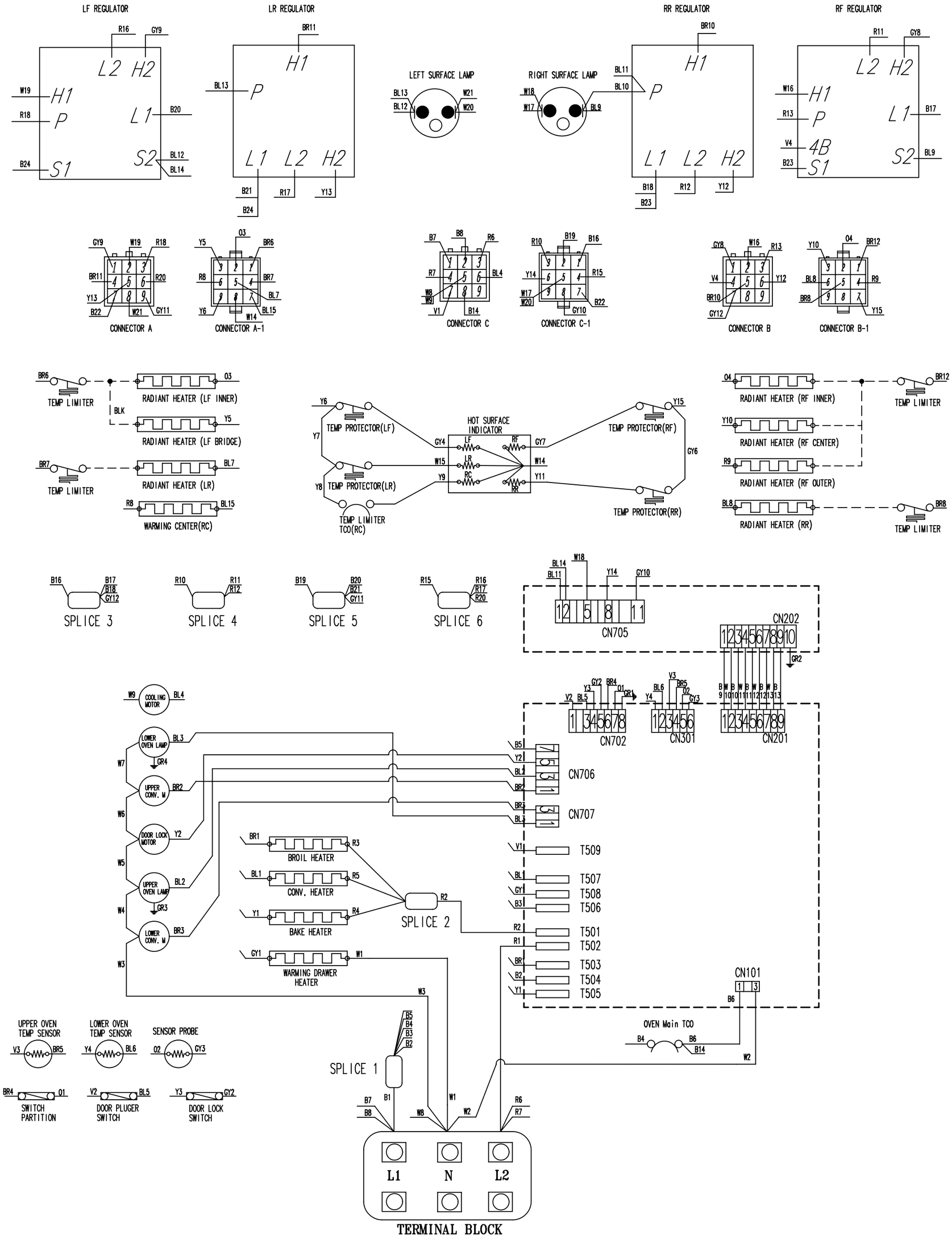
NOTE
1) INPUT POWER : AC240V 60Hz, 14000W, 58.3A
   1-1) OVEN HEATER : MAX 5400W, 22.5A
   1-2) COOKTOP : MAX 8600W, 35.8A
2) OVEN DOOR OPENED AND UNLOCKED

WIRING DIAGRAM
MODEL : NE58F9710WS/AA

COLOR		COLOR	
RED	R	ORANGE	O
WHITE	W	VIOLET	V
BLUE	BL	BLACK	B
YELLOW	Y	GRAY	GY
SKY	SK	GREEN	GR
BRN	BR		



HEATING ELECMENTS

COOKTOP ELEMENTS		
COMPONENTS	INPUT	WATTAGE
RF RADIANT ELEMENT	240V	3000
RR RADIANT ELEMENT	240V	1200
LF RADIANT ELEMENT	240V	2400
LR RADIANT ELEMENT	240V	1800
RC WARMER ELEMENT	240V	100

OVEN HEATING ELECMENTS		
COMPONENTS	INPUT	WATTAGE
BAKE	240V	3000W
BROIL	240V	4200W
CONVECTION	240V	1250W
WARM DRAWER	120V	600W

SAMSUNG ELECTRONICS

GSPN (GLOBAL SERVICE PARTNER NETWORK)

Area	Web Site
Europe, CIS, Mideast & Africa	gspn1.samsungcsportal.com
Asia	gspn2.samsungcsportal.com
North & Latin America	gspn3.samsungcsportal.com
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